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ABSTRACT Thirteen papers on early childhood education are presented on the following topics: stimulation and cognitive development of infants and younger children, curriculum development for young handicapped children, a rationale for sequencing instructional activities for preschool handicapped children, observation of educational activities and children's behavior in a nursery school, materials and procedures for assessing cognitive development in preschool children, a preschool program for young cerebral palsied children, the British Infant School Program, the program of the Human Development Training Institute (San Diego), two papers on the young visually impaired dealing with age ranges from birth to 3 years, and 3 to 6 years, and a service for parents and visually handicapped preschoolers in a metropolitan area. Also included are discussions of a demonstration project of speech therapy for preschoolers with cleft palate and new techniques in speech therapy for young children. (RJ)

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Exceptional Children Conference Papers:

Curriculum, Methods, and Materials in Early Childhood Education Programs

Papers Presented at the

Special Conference on Early Childhood Education

The Council for Exceptional Children

New Orleans, Louisiana

December 10-13, 1969

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Table of Contents

Page

Earliest Curriculum 1
Will Beth Stephens

Some Thoughts on Curriculum Development for Very Young Handicapped Children 9
Gloria F. Wolinsky

A Rationale for Sequencing Instructional Activities for Pre-School Handicapped Children 18
Mary R. Adair

Activity-Setting Factors and Children's Behaviors 25
Morris Davidson, Ph.D.

Materials and Procedures for Assessing Cognitive Development in Preschool Children 85
Masako N. Tanaka

United Cerebral Palsy of Queens Young Infant Program 92
Dolores M. Goldel, Ed. M.

The British Infant School Program 102
Charmaine Young and Sylvia Hucklesby

Promoting Emotional Growth in Early Childhood 105
Uvaldo H. Palomares

The Young Visually Impaired Child 117
Carol Halliday

Visually Handicapped Children, Birth to Three Years 134
Winnifred Connelly

A Service for Pre-School Visually Handicapped Children and Their Parents in a Metropolitan Area 144
Virginia Murray

A Demonstration Project of Speech Training for the Preschool Cleft Palate Child 153
Robert J. Harrison, Ph.D.

New Techniques in Speech Therapy for Young Children 166
Martha E. Brown

Preface

Curriculum, Methods, and Materials in Early Childhood Education Programs is a collection of 13 papers selected from those presented at the Special Conference on Early Childhood Education, New Orleans, Louisiana, December 10-13, 1969. These papers were collected and compiled by The Council for Exceptional Children, Arlington, Virginia. Other collections of papers from the Conference have been compiled and are available from the ERIC Document Reproduction Service. Other collections announced in this issue of Research in Education may be found by consulting the Institution Index under Council for Exceptional Children or the Subject Index under Exceptional Child Education. Titles of these other collections are:

Early Childhood Education - An Overview
Environmental Influences in the Early Education of Migrant and Disadvantaged Students
Training and Personnel in Early Childhood Education Programs
Parent Participation in Early Childhood Education

EARLIEST CURRICULUM

Will Beth Stephens
Temple University

As teaching of young children extends into the home, curriculum for early and still earlier ages is required. The reason for this extension is that the importance of infancy as a crucial period in human development presently is being established and discussed in terms of its many dimensions. As Frank (1966) notes:

> Indeed, one of the distinguishing events of our times may be the discovery-- or rediscovery--of infancy as the crucial stage in human development, calling for intensive study and more understanding of babies' highly individualized needs and capacities, their vulnerability, and especially their many potentialities (p. 3).

Presently available assessment techniques (Uzgiris & Hunt, 1966) provide information on cognitive development as it occurs or fails to occur during the sensory-motor (Piaget, 1963) stage, a period from approximately birth to two years in normals. If gaps or arrestations are revealed in these measured areas of cognitive development remediation is indicated. Because of the recognition that cognitive maturiation is a part of total maturation which involves such variables as individual tempo and growth pattern the curriculum emphasis is not on acceleration of development, but on provision of circumstances that will make possible and promote interaction of the child with his environment. He develops; we provide the opportunity. Such is the generation of the mind.

A growing body of evidence indicates that education prior to two years, or even prior to one year is both possible and profitable. One study which has important implications for programs which are concerned with educational remediation from birth onward was accomplished by Coriat, Theslenco, and Waksman (1967) at the Children's Hospital in Buenos Aires. The purpose of the study was to provide early remediation to infants with Down's Syndrome, a syndrome identifiable at birth. The success of their remediation is evidenced in the fact that the experimental group had a mean IQ of 67 upon entrance into kindergarten, whereas the mean IQ of the control group was 49. What was done to promote this intellectual growth? The educative aims for the first quarter of year of the child's life were:

1. To enhance the child's physical and affective contact with his mother,
2. To stimulate his reflexes in order to increase his physical contact with the environment,
3. To stimulate his senses so that perceptual growth would occur,
4. To promote initial awareness of a body scheme,
5. To prevent the development and establishment of autistic habits.

Guided by these aims, the trained teacher, the physician, or the psychologist, examined the child every two or four weeks and furnished careful verbal and written instructions to the mother. Some of the more important directions were:

1. There should be highly intimate communication between the mother and child during cleaning, clothing, and feeding activities. The mother should pet, talk to, and embrace the child.

2. The oral reflex of searching should be stimulated before supplying the infant with the nursing bottle. Pacificers were used in order to stimulate sucking, which in turn strengthened the muscles of the lips and prevented the protrusion and sucking of the tongue.

3. As the child lay in the crib, tonic-neck reflexes (extension of the arm on the side to which the head is turned together with flexion of the opposite arm) were stimulated by rolling the infants head right and left, and by promoting extension of the mandibular piece. In this position, ocular fixation on the mother's face was possible; later on effort was made to let his own hand be the center of ocular fixation. The visual stimulation was enhanced by touch, sound, and taste. Appealing bright objects were shown in order to stimulate hand grasping.

4. If the head tended to assume and retain a mid-line position, sand bags were used to promote retention of other positions.

5. Flexion and adduction of arms and legs was accomplished.

During the second quarter the mother was told to:

1. Hold the baby vertically rather than horizontally.

2. Seat him on her lap.

3. Talk to him from various angles (from the sides and directly in front). Sounds the baby uttered were repeated and thus prolonged by the mother.

4. Bi-manual grasping was stimulated.

5. Objects which were to be offered the baby were selected because of the ability they had in stimulating the baby's sight and touch.

During the third quarter the mother's instructions were:

1. To sit the baby in a small chair and have him put both hands on a table.

2. Support was to be used to maintain an errect position.

3. Objects were offered the baby in an effort to stimulate manipulation with both hands and exchange of the object from one hand to the other.

4. Independence was developed by having the child eat biscuits by himself.

During the fourth quarter the child was to:

1. Prepare for creeping and walking
2. Gain finger dexterity
3. Develop saptial notions
4. Acquire basic notions of body scheme starting with the mouth
5. Acquire oral language

Creeping was stimulated by what is commonly termed "patterning", putting his arms and legs in the correct position and helping him to accomplish the movement.

The sequence of steps that preceded walking were:

Full mother support

Self support with both hands

Self support with one hand (from the wall at first, then from the furniture and later from a stick; still later he took his step without support).

Movement was stimulated by putting desired objects just out of reach, or connected to the child with a string as is the case of a pull toy, Objects were thrown to induce the child to follow them with his eye. Effort was made to instill awareness of "give" and "take" words from his everyday environment were repeated and were accompanied by action on the part of the object or person involved. Different parts of his own body were shown to him, touched and named; then he was requested to show them.

When he was observed in autistic activity such as rhythmic rocking and tongue sucking he was distracted and interest in objects or persons was promoted.

Another study reported by DeLorenzo (1967) in Montevideo, Uruguay also was concerned with children from birth onward. In this instance the experimental group was composed of high risk infants which were defined as those who had an Apgar score of six or below, or who had genetic or chromosonal abnormalities, or serious gestational abnormalities, or difficulty at delivery, or birth weight below 1,500 grams, and/or abnormalities lasting more than three days after birth (e.g. jaundice). The control group was composed of "low-risk" infants. The purpose of the project was to develop a sequential series of stimuli which would promote better development of "high risk babies". The program was based on an established sequence of motor development and was continued until the child was 18 months of age.

Some of the techniques utilized by DeLorenzo included stimulation of the perioral side of the mouth through use of a brush - and also stimulation of peripheral vision to promote head turning. Tactile stimulation was provided by materials of various textures. [Comparison of the experimental and control group is presently being accomplished.]

You will note that both programs were based on available scales of motor or sensory motor development. Both located the child's present level of development, and then provided activities to promote development to the next level. Frequently repetition and variation of the activity was necessary.

Note is made that in each study the infants were infants who were assumed to be experiencing difficulties in cognitive development, not because of their performance on an intelligence test, but because of physical symptoms that are established correlates of delayed intellectual development. Physical symptoms rather than cognitive performance were screening criteria because until the provision of the Uzgiris-Hunt Instrument for assessing Infant Psychological Development assessments were not available which measured cognitive development as it occurred or failed to occur from birth onward.

Usefulness of the Uzgiris-Hunt scale to assess sensory-motor development among the severely mentally retarded has been demonstrated in a study conducted by Larsen, Bricker, and Schoggen (1966) another project conducted by Stephens, Kirk, & Painter which provided a tutorial program for culturally disadvantaged children, ages eight months to two years, used information provided by the Uzgiris-Hunt scale in curriculum planning. The question asked in the later study was, "Can a daily, one hour, home tutorial program prevent a continuance of deficits common to the cognitive development of culturally disadvantaged children, ages eight months to two years?" To answer the question thirty culturally deprived infants (who had siblings in pre-school classes) were randomly drawn and assigned to: (1) a group of fifteen who would receive tutoring, or (2) a group of fifteen who would not (N=30, C.A. eight months to two years, IQ 80-120). While essentially sensory-motor the initial phase of the remedial program emphasized eight areas of cognitive development: (1) language, (2) pictorial representation, (3) space, (4) number, (5) classification, (6) time, (7) reasoning, and (8) imitation. Detailed description of the program is provided by Painter (1967). The organizational plan for the tutorial sessions took the following form: During an initial period of three to four weeks the one hour tutorial sessions were spent in non-structured activities; this was done in order to establish rapport and to confirm observed developmental levels. The child was provided toys which required both gross and fine motor activity. After this period and as a more structured program was established the child sat still and worked for increasingly longer periods of time. A Baby Tenda (a canvas seat surrounded on the four sides by a work area) served as a desk for the younger children; a small table and chair was used for the older ones. At the onset a dozen or more tasks were required to maintain interest during the one-hour session. Later, primarily because activities were structured to insure fun, success, and satisfaction on the part of the child, each child would sit and work for the full hour on no more than five to seven tasks. Success of the project is demonstrated in the fact that the experimental group's mean IQ (Stanford-Binet Intelligence Scale) was 108.1 on the posttest; mean for the control group was 98.8. When analysis of covariance techniques were used, holding chronological age constant, posttest difference between the groups on mean mental age was found to be significant at the .05 level (Painter, 1967).

The basic tutorial approach for the eight cognitive areas consisted of: (1) locating the child developmentally in a particular area, (2) devising methods which would aid transition from one developmental level to the next, and (3) dividing the training task into a sequence of activities. Soundness of the approach is demonstrated by the positive findings which have accrued from its use; need for its implementation is demonstrated in the functional inadequacies of exceptional children two years of age and under.

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Some Thoughts on Curriculum Development for Very Young Handicapped Children

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When the concern is for pre-school handicapped children and the topic is curriculum development, there are three fundamental factors that have to be realized:

1. Strategies have to be developed concerning planned intervention in terms of curriculum design for children much younger than have traditionally been in formal educational experience for exceptional children and youth;
2. Curriculum experiences for the 1's, the 2's, and the 3's have certain aspects that are not typically within the constellation of problems that have to be solved when children are older;
3. Very young handicapped children pose some particular problems in terms of curriculum experiences, in that their very handicap often determines the dimension of the curriculum, and so paradoxixally is often the cause and the remediation within the dimension of time that these youngsters are seen in an educational sense.

In terms of strategies for the very young, curriculum questions of who, what, when and/or where cannot be used beyond its most elementary aspects. Furthermore, the traditional analysis of curriculum as child centered, subject centered or society centered does not serve too well. With the handicapped child as the basic concern, the task is to place the questions and thinking into some type of dimensional analysis that incorporates classical lines of conceptualization. In addition the particular world of exceptional pre-schoolers must be placed into this analysis. However, this placement is not to simply complement or even to merge with the analysis, but rather to understand as still another dimension of an already multi-dimensional world.

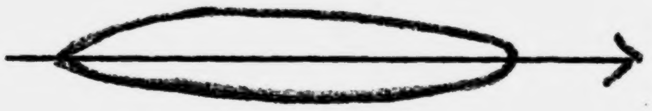
Within the lives of young children certain "happenings" must occur within a relatively short period of time. These happenings are such that they must be learned or coordinated within a what is often called "critical period" if the child is to be able to cope effectively with the environment. If this does not come to pass, there is trouble. Therefore there must be planning for what are basically artificial experiences. What are these happenings?

1. Broadly, these are the "learnings" of young children running the gamut from the affective to the cognitive. (Murphy, 1967)
2. The biological characteristics of a great pre-planned scenerio that can in a real sense be altered by illness, deprivation and great stress.
3. The very act and quality of nurturance by the adult world with its dimensions for providing the basis for personal self esteem, provision for a stimulating environment, and involvement with the world around the child.

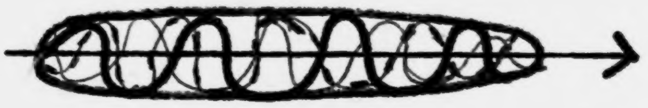
Time and the child himself cross these stated dimensions. However, the nature of time in relationship to the child alters these dimensions, places certain emphasis at particular periods of time and creates because of the particular point of interaction, i.e. time (age) child (nature) ocurrence (outside forces) its own emphasis and own departure.

If time is thought of as an arrow that moves from left to right:

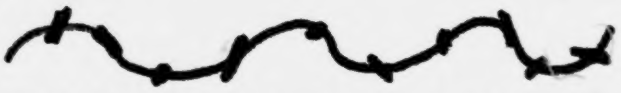
and if an individual infant is placed on this dimension as follows:



noting that time was before him and will be after him, and then place these three aforementioned "happenings" (1. learnings, 2. biological, 3. nurturance) into a helix of interaction:



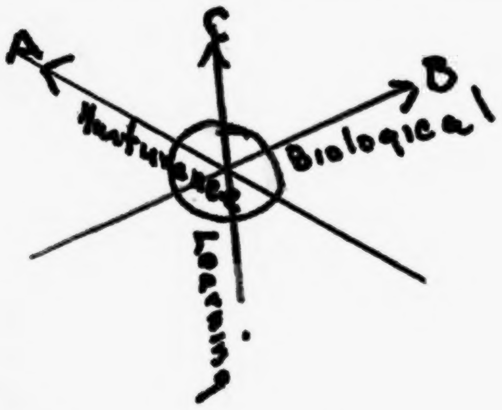
but in addition realize that any one helix is composed of various nodes that vary in size in terms of needs, tasks and experiences:



one can begin to appreciate the enormity of the interaction, the possibilities for problems and the ultimate need for a multi-dimensional, multi-system approach to the problem of curriculum development for pre-school handicapped children. For the nature of handicapped infants and young children superimposed on the very plasticity of infant and young children's development mandates a multi-model approach, with the focal point of each model being the point of interaction of the specifics of "learning", "biological development" and "nurturance".

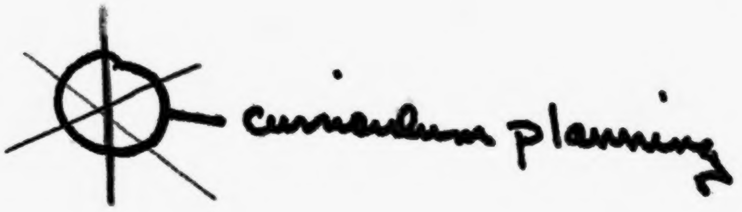
To be specific:

If one of the learnings of children in the 0-2 years range is to learn to act selectively, to turn toward a particular stimuli which is a step beyond passive looking and the child because of a visual impairment cannot do this, then as we have seen in the Freiberg studies (1968), he cannot go onto a wider environmental exploration which precludes certain later cognitive and behavioral responses. The point of intersection here is:



With lines A and B being more dominant at this time than C because of the implicit problem of time dimension, the first few months of life and its critical role it plays in preparing for later behavioral sequences.

If Milton Senn's excellent statement, "Curriculum is the context in which plans are produced for further action," (Senn, 1969) is used then the intersection is the context in which plans are produced. This is the point at which



plans are made for the curriculum experience in terms of age, behavior to be learned or modified, degree of handicap, and strengths and weaknesses of the environment. Here is where expertise of many kinds converge to make a choice as to how, when and where we intervene. This is where the action is!

However, in terms of the multi-dimensional aspect, coordinates are replaced and have different interactions as time changes, even though learning may not have been successfully achieved. If learning, behavior, environment and physical dimensions all change then there is the proverbial new ball game. However, as it is all the more likely that only certain aspects change, restructuring takes place around a constant, that seemingly changes because of time, but it terms of function may remain the same.

In a very real sense this means that curriculum planning, design and experiences are very fluid and change in terms of the task at hand, but always in relationship to the child. There is no pre-planned curriculum in the cook-book sense, but rather a series of guidelines based on what we know about normative development interlaced with broad goals intimately tied up to the stated cnditions. The specifics are the child, his problem and how to cope. There are in reality many mini-curriculums reflecting a constant realignment of concerns in terms of the growing and evolving needs of the child as he lives and works in a sometime supportive, sometime hostile environment.

Now that a theoretical construct of curriculum design has been drawn some basic questions must be superimposed that will ultimately reflect in the way experiences are structured and presented for action.

1. Traditionally parents and the family are the teachers and the milieu in which babies and the very young are taught. This reflects certain social and political values.
    a. What happens to parents when they are no longer prime education?
    b. What happens when one reacts to the very young in terms of desired outcomes because of stated shortcomings?

   c. What happens to children when environments are manipulated?

   d. What role does multi-personal handling play in the development of the handicapped child?

   e. What is the role of the teacher?

2. Because of the nature of the handicap interacting with growth and development, developmental discrepancies in behavior are often seen.

   a. What is really known about intervention techniques?

   b. How do we plan for intervention in relationship to optimal time or periods of rapid growth.

   c. How do we cope with variability of development within the constancies of other aspects of growth.

   d. How do we evaluate the different functional aspects of environment in relationship to the time and purpose?

   e. What experiences facilitate learning or is distinctive in terms of the deficit itself?

   f. How do we approximate the normative aspect of interaction when highlighted in one area in which to work and develop?

3. The intervention process itself implies a use of techniques, materials and processes that are supposed to stimulate certain specific responses.

   a. How do we learn to analyse the artifacts by which we hope to stimulate?

   b. Do the things that we use to stimulate approximate the supposed deficiency, or do toys, rattles, and puzzles and the like add a new dimension to what a child has

has to learn?

c. Are infants and toddlers conditioned to the stimulus rather than to the global or generality of response?

d. How do we realistically explain, prepare or train for intervention as adults, when the act that we are to be expert at is at the level or such elementary response, that it is all too easy to escape into the intellectual, the mechanics of materials, the provinciality of profession and lose sight of miracle of complexities with which we are working.

Curriculum development for very young handicapped children is,as we know, a multi-faceted, complex undertaking. However complex and multi-faceted can be and is used in describing any endeavor with handicapped children and youth. Furthermore one of the complexities ascribed to the problem as seen in later years is the inadequacy of experiences during the critical early years.

Special education is indeed fortunate in being given the opportunity to work with and develop programs for very young populations. Now that this opportunity is here, it would be most unfortunate to neglect the bssic rational and processes in the haste to remediate and correct.

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A Rationale for Sequencing Instructional Activities for Pre-School Handicapped Children

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As I reviewed the literature for my presentation here, I came across an article by Bialer and Sternticht in the August, '69 issue of Mental Retardation which discussed the areas of research that AAMD fellow psychologists viewed as most important for further study. The issues were: cognitive development; psycholinguistic development; the definition and conceptual problems of the term "intelligence"; affective development and differential diagnosis. Perhaps I walk in where angels fear to tread, for it seems to me that the sequencing of preschool activities for the handicapped child is dependent upon all of the previously mentioned controversial issues.

Let me say that my interest in sequencing stems from the realities of the present preschool opportunities in rural areas, specifically Pennsylvania. Head Start type programs service the majority of identifiable familial retardates, unless they are unmanageable in programs with larger numbers of children. I am concerned with the preschools funded by the Mental Health, Mental Retardation Programs in Pennsylvania. I am cognizant of research which questions the efficacy of educational experiences for the severely retarded (Hottle, 1958; p. 275 Fouracre et.al., 1962); but if the philosophy of retraining the handicapped child in the community flourishes, we will be faced with providing training for the severely and perhaps the profoundly retarded preschool child.

It seems necessary at this time to set down some of the precepts under which I operate in sequencing instructional activities at the preschool level. It matters not whether we draw from Harlow, Hebb, Hunt, or Piaget, we are all here because we believe that the earlier we can impose some sort of educational programming on the handicapped child, the better off this child will be.

There are apparently optimum times for intervening, through stimulation, directed learning, or extended learning in the life of the handicapped child. These times occur when the particular system toward which we focus our intervention is in its period of most rapid growth. The most rapid growth for the child occurs from the moment of conception through six years of age. In order to sequence we need more information about the growth patterns of the preschool retardate. The sensory motor structures which are developed during the first two years of life represent the foundation upon which other more highly developed cognitive structures are built.

In evaluating the effects of instructional sequence on children, teachers are almost forced into adopting the position that external manipulation can change behavior. However, we must be aware that we can change behavior to a considerable degree without making any assumption about change in the child's cognitive structure, or the child's degree of understanding. The latter is the goal, the former may be the means. We can set down the scope and sequence of the experiences we provide for the preschool child in a very vigorous fashion, and continually seek to verify the adequacy of our sequential hypothesizing, to discover if the child is beginning to manipulate his environment.

If one views development of learning abilities as funnel shaped, double, interconnected helicies, one might be able to build a sequential, developmental learning model, similar to the one constructed by Watson and Crick in their discovery of the structure of the DNA molecule. The backbone of our helix might be sensory-motor integration, with the spirals representing the congitive and affective aspects of human behavior. The points of connection would represent critical periods for task development. The interconnecting strands themselves would represent units of knowledge which might facilitate learning.

Let me roughly illustrate with the sequencing of spatial relations and intersensory integration. Piaget and Inhelder (1956) suggested that an infant develops a number of space worlds at first. Later he combines his tactual, visual and auditory perceptions into a motoric frame of reference. It has been felt that children who cannot effectively combine perceptual-motor data continue to live in two worlds - the motor world in which they move, and the perceptual world in which they perceive a disorganized and distorted confusion of impressions. Only through a long process of experimenting, observing, comparing and differentiating various parts of the body in terms of movement can there be integration. It has been suggested that improvements in intersensory integration are due, in part, to the utilization of increasingly effective ways of exploring stimuli. We, in curriculum planning, are not aiming our efforts toward sequencing interventions which will facilitate integration of sensory data.

In a study done by Abravanel (1968a) it was found that attributes of spatial position are still imperfectly attended to and grasped and are not readily transferred from haptics to vision by ages three and four. During the fifth year, haptic attention to the subleties of spatial distribution of surfaces is greatly refined. Shape, solidarity and textural properites of objects are haptically perceived prior to elementary properties of spatial position. Visual attention to spacial position appears earlier in development than haptic attention to spatial position. In another study done with children whose ages were from 3.4 to 14.2 years, Abravanel (1968b) found that intersensory integration accuracy increased with age in what appeared to be a typical logarithmic growth curve. We are not yet sure of the severely retarded follow this growth curve.

The maximum development of spatial and visual perception is achieved between ages 3.5 and 7.5. During this time children can most easily be trained to develop and master skills in visual perception and motor abilities required for learning. It is imperative that difficulties in visual perception should be picked up as soon as possible and training start immediately, as distortions in visual perception can seriously impair the possibility of future learning (Frostig 1964).

At about age seven the agreement between visual. perceptual, and spatial disturbances and poor classroom adjustment diminishes. Peaget (1954) contends that the child's approach to handling the environment improves at about seven or seven and one-half. At this time the already developing cognitive processes gain dominance over perceptual development. A child can solve perceptual problems cognitively. Many of these cognitive approaches will help him compensate for his perceptual difficulties. The preschooling can attempt to lay a foundation for any cognitive development that might occur.

Edgar, Ball, and McIntyre (1969) analyzed the effects of perceptual motor training on adaptive behavior. Adaptive behavior was defined by them as all behavior which enables the individual to cope with and master his environment. The hypothesis that changes in sensory motor integration assumed to result from intensive sensory motor training would be reflective in gains in adaptive behavior was supported by the experimental results. Piaget's developmental theory also states the high probability of a gradually evolving hierarchy of cognitive behavior, the roots of which are imbedded in the child's efforts at early sensory motor integration. Herman (1962) and Kephart (1964) have given us research which indicated that perceptual motor skills follow a specific sequence and that each skill is related to all other skills. Barsch (1964) described the process as one in which the infant passes through an apprenticeship in each area before advancing to the development of efficience in the next. Experience appears to be the tool that shapes and organizes perceptual motor skills. Once these skills are integrated and organized by an individual, they are called for to meet the various demands placed upon them by that individuals environment. The preschool curriculum must provide the experience which will aid in skill integration.

Cratty (1964), Hawkes and Pease (1962) and others have all indicated the importance of adequate performance in the motor skill area to satisfactory school adjustment and peer group acceptance. If we put this into the funnel shaped helix this would connect the motor area, the affective domain, and the cognitive domain. The roots for these learnings are stimulated by preschool experiences.

Gagne (1966) asked the following questions in selection and organization of content of the curriculum. Does a particualr item of content at some point in a curriculum facilitate learning or slow it up? Is there a sequence of curricular elements that promotes learning more than does some other sequence? And how can one find out? If we are attempting to change or extend student behavior, then we must state the content of the curriculum in terms of the expected student behavior that we wish to elicit. A student would reach a given objective through a series of learning experiences, or steps. Gagne calls these "prerequisite capabilities." He describes the curriculum as a sequence of content units arranged in such a way that the learning of each unit may be accomplished as a single act, provided the capabilities described by specified units (in the sequence) have already been mastered by the learner. For the preschool child, the content unit can be equated with a developmental task. The responsibility of the teacher in this type of sequencing activity is to identify the content unit, and then to provide appropriate methods and materials whereby the student can gain the capabilities of prerequisite units.

There are two final considerations with which I would like to leave you, concerning the objectives of sequencing materials of preschool children. Children need to be given the opportunity to learn to make choices. This is an activity in and of itself which must be sequenced. They must learn to discriminate an d generalize among wide variety of stimuli. The genralization - discrimination continuum gives a teacher an excellent basis for beginning her sequencing activities. If the retarded child has trouble in generalizing or making discriminations, if he does not learn well incidentally, if his attention span is short, and if he has difficulty making associations, it is necessary to begin teaching early to this child those kind of responses that he can make to his environment and to himself, so that no matter what his final placement may be, he may derive some benefit and enjoyment from feeling that he has some control over his environment. Sequencing, it seems to me is only a way of accomplishing this purpose. It is also important to use this period to gather diagnostic information, so that at the end of the preschool years, the child can be placed in the best possible situation for both the family and the child. Through precise and adequate sequencing of the experiences the child has in the preschool the teacher will be in a far better position to make recommendations about the child's placement, about his strength and weaknesses, and whether or not he will be kept in the community, be placed in an institution, go to a day-care center or, perhaps, to a class for the educable retarded.

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Activity-Setting Factors and Children's Behaviors

An ecological exploration of certain educational activities in a sub-setting of a nursery school.

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Introduction

The history of the nursery school and of concerns for the educational welfare of young children is traced backward as much as sixty years (Read, 1966; Sears and Dowley, 1963), with spurts of growth related to the great wars and crises which have punctuated world history since then. Not until the signing of the Economic Opportunity Act, however, in November of 1964, did pre-school education enter its present phase of conspicuous development. Quite impossible without tremendous support in public policy and accompanying federal funds, this new phase of development was triggered by the tardy recognition of the special needs of socio-economically disadvantaged children, or those handicapped by attitudes within the dominant culture.

Although the results of program evaluations are not consistently encouraging, it seems highly desirable that the growth and expanding development of pre-school programs shall continue. Hunt's formulations regarding the importance of early experience (Hunt, J. McV., 1961) are valid not only for the disadvantaged but for all children. Bloom (1964) makes the carefully-studied point that "...in terms of intelligence measured at age seventeen, about fifty percent of the development takes place between conception and age four, about thirty percent between ages four and eight, and about twenty percent between ages eight and seventeen." In this writer's opinion, therefore, if the intellectual and productive potential of the population of this or any other country is to be advanced, a carefully planned educational process needs to be extended chronologically downward for all children.

The developing pressures and increasing support for pre-school educational programs, and the quite justifiable sense of urgency which characterizes some of the programs which are operating, make it imperative that more attention be turned to the study of the physical and psychological ecology -- the settings, curricula, teaching and management techniques -- and of children's learning patterns and interpersonal behaviors in pre-school educational settings. It is in this context that the present study explores the

the ecology of an existing pre-school educational setting, to observe and to identify relationships between factors of that ecology and the children's behaviors therein.

Observational Study in the Nursery School

Such a study of social-environmental interaction may most effectively be made through direct observation of the behaviors in the unchanged natural setting, with the investigator functioning as the "transducer" rather than the "operator" of the behaviors (Barker, 1965). One may more accurately isolate the behavioral variables occurring naturally in the setting through the careful avoidance of the injection of manipulative variables. Indeed, it is argued convincingly that we are frequently in error in attempting to generalize from findings obtained under laboratory controlled conditions "to what exists in the everyday lives of organisms." (Fawl, 1963; Willems, 1965).

Direct observation "...of behavior and situation by the investigator," states Barker (1955), is the "primary method of psychological ecology." Observational methods are used in designs which include manipulated variables or in which the variables for study are pre-selected (e.g., Body, 1955; Gellert, 1962; Marshall and McCandless, 1956; Moustakas and Schallott, 1956; Olson, 1931). They may be used with and without investigator-developed or standardized measurement devices (e.g., Charlesworth and Hartup, 1967; Hartup and Coates, 1967; Hartup, Glazer and Charlesworth, 1967). In the true ecological field study, however, the task is to determine "the state of affairs that exists independently of the investigator's methods." (Barker, 1955). What the investigator does or says in the situation -- the extent to which the investigator enters the situation in any way -- changes the psychological ecology and alters the conditions which he proposes to study.

The methods of observational research have in the past mainly consisted of direct observation by investigators on the scene, either discreetly stationed among the observed, or watching and listening by means of one-way mirrors and electronic sound systems. The achievement of total observation and of accurate recording has always posed a major difficulty. For example, Patterson, Littman, and Bricker (1967) used a method of direct observation which placed the investigators within the nursery school among the children and utilized microphones in face masks, a la Schoggen (Schoggen, 1964), to facilitate tape recording of observations. Development and variations of methods of observation and of recording are reported at length by Boyd and Devault (1966), and by Medley and Mitzel (1963). The reader is respectfully referred to these reports for more complete discussion.

A Non-Intrusive Observational Method.

If it is the task of an ecological field-study to determine the state of affairs that exists independently of the investigators' methods (Barker and Wright, 1955), it is the responsibility of the investigator to affect the ecology as little as possible -- ideally, not at all. A suitable observational method, then, should be such as to allow the observation of a representative sample of the behaviors, and the securing of an accurate record of the observed behaviors, without influencing that ecology.

Kounin (1966) states that

> ...an observational medium should be passive and receptive rather than critical, should allow all events to come through without distortion or selection, should be free of a will of its own, and should neither resist nor invite occurrences onto its record.

For this reason, Kounin developed the use of video-tape recording as an observational medium (Kounin, Friesen, and Norton, 1966). This method permits minimum intrusion into the setting and maximum recording of behavior, both picture and sound, on magnetic tape. Subsequent repeated viewings of the tapes provide practically unlimited opportunity for accurate coding and for maximum observer agreement. It is this method which was adopted, after preliminary investigation, for the present study.

Some Definitions and Assumptions.

Certain operational definitions drawn from the work of Barker and Wright (Barker, 1960; Barker & Wright, 1955; and Wright, 1960) may be usefully considered at this time: (a) settings are milieu parts that provide time, place and facilities that are suited to certain kinds of human behavior. (b) A behavior setting is a stable part of the physical and social milieu together with an attached standing pattern of human behavior. The behavior setting has its own distinctive characteristics of time, place, things, and personnel that accommodate the behavior pattern. The pattern remains essentially the same over extended periods of time even though the population of the setting may change. (c) A situation is the relevant person-environment context of a particular action at a particular time.

Wright (1960) makes three further assumptions about situations:

1. Certain sorts of situations rather than others tend to arise in a given setting.
2. Yet, settings and situations are by no means univocally related. On the contrary, (a) very radically different situations can occur in the same setting, and (b) virtually identical situations can occur in different settings.
3. The behavior of the child at a particular time does indeed depend more directly upon the situation then upon the setting in which it takes place.

These assumptions are highly significant in relation to the study at hand. While the behavior-setting selected for the study does indeed have attached standing patterns of behavior, and while certain sorts of situations rather than others tend to arise in the setting, one of the first facts which becomes evident in the course of observation is the sensitivity of the children's behavior to the conditions of the situation within the setting. The kind of [illegible] situation, or type of activity on-going in the setting , is observed to exercise a significant influence upon the behavior of the children.

Gump and Sutton-Smith (1955) in a study of pre-adolescent boys in a camp setting, state that the

> ...coercive and provocative power of an activity rests upon two sub-aspects: the behavioral limitations and possibilities in the physical setting and its objects, and on the standard patterns of performance which constitute the activity.

Observations in the present study firmly support the statement, by these writers, that "...the basic characteristics of the activity-setting -- not the activity - settings as such -- determine the impact on the participant." That is, the amount of space, the kinds of tools or instruments available, the medium (e.g., water), and the possibilities which they provide for certain types of activities, provoke or coerce specific types and ranges of behavior. Perhaps more meaningful for educators is the fact that in reality we are observing the effect of the manner in which the activity is directed or manipulated by the teacher in the situation.

The Setting

The setting for the study was the Wayne State

University Nursery School which is situated on the premises of a large inner-city housing project in Detroit. Six student teachers are trained in this facility during each 11 week academic quarter. The actual observations were confined to a smaller sub-setting, a teaching laboratory.

The teaching-lab, or "rest" room, as it is called, is approximately nine feet square, and is furnished with one door, a steam radiator, one window with a blind which can be drawn to darken the room, a floor rug, a single hanging incandescent light, and one electrical outlet to permit the use of a record player or other suitable appliances. No other furnishings are present, and the walls of the room are bare, except for a single high-placed shelf upon which may be stored rhythm instruments and similar paraphernalia intended for the current lesson period. The upper portion of one wall is fitted with a nearly full-width "one-way mirror", from the other side of which observers may have almost complete visual command of the interior. A microphone which is permanently placed within the room carries sound to the observers.

Every day, each student teacher brings a small group of children to the lab-room for a brief rest period followed by an instructional session. Her lesson plan has been provided in advance to her supervisor and is available to the researcher. Six groups may be observed each day, each in a different activity and each with a different adult leader. The groups are prearranged, largely according to age, but may vary somewhat from day to day in number and in membership because of absence. From three to eight children make up each group, with every child who is present in the nursery school on any one day appearing in one of the groups.

The Student Teachers

No attempt was made to select specific teachers or sessions for purposes of the study. It is to be expected that teachers and children vary in all normal situations; this one was kept as completely normal and unaltered as possible. Five women and one man, ranging in age from twenty to forty-six years, were in training at the nursery school during the course of this study. Four of them were in their third year and one in the fourth year of college. The sixth student, the only one who was married and had children of her own, was post-degree. For two of the students, this was the first professional experience with children of any age. Two others who had had at least one previous experience teaching children, however minimal, had never worked with children at this age leve. Only the older student had had extensive experience with young children, and this was in a semi-professional capacity.

The Children

One feels compelled to consider the undoubted truth that varying levels and types of antecedent experiences impel individuals to react differently to the same stimuli. In addition, Gellert's seemingly appropriate criticism states (Gellert, 1955) that most of the children observed in nursery schools have been of "above average intelligence, from high socio-economic strata, and of Judeo-Christian cultural and ethnic heritage." This description must apply, not only to the children as subjects of study, but also to these same children as social behavior objects in each other's life-situations (Wright, 1960).

Gellert suggests, most correctly, that the methods of direct observation need to be extended more to children of other sorts and to a larger variety of environments. The present nursery school study, so facilitated by this setting, profits also from the fact that the policies of the Wayne State University nursery school require a very special kind of population balance. This is indeed a particularly appropriate facility for research, with a population expressly drawn from a broad community cross-section.

The school is licensed to care for 50 children, 25 in each session. The population of the nursery school is very carefully selected, in an attempt to maintain representation of nearly every economic, social, religious and ethnic aspect of the city of Detroit. In deference to location, approximately one half of the children are residents of the Jeffries Homes, whose population is mainly but not entirely black and of lower socio-economic status. The homes of the others are spread over greater Detroit. "The children come from intact and broken homes, from small and large families, from families of very limited and almost limitless resources, and from parents with varied education.

and experience." (Law, 1963). The fees are minimal and vary according to family income. Grants-in-aid are made available for some families through a scholarship fund which is maintained by community contributions.

At the end of May in 1967, enrollment at the school numbered forty-two and was evenly divided for project and non-project children as well as for sex. In actuality, three children were gone most of the time during which observations were being made. Thus, the number of children involved in the study totalled thirty-nine, with twenty-one girls and eighteen boys. Ages ranged from two years-eight months to five years-five months. The mean chronological age for boys was 51 months and for girls 46.95 months.

The Effects of Observation Upon the Observed

The school is frequent host to community, student and faculty visitors. It has also been utilized for research purposes on several previous occasions. Parents are advised, on registration of their children, that this is one of the purposes of the school. Thus, the fairly regular appearance in the nursery school of the two male observers is considered to have had little more than momentary effect upon the children or any of their parents who happened to come in.

The observations were made in late May and early June when all of the children were familiar with and reasonably comfortable in their surroundings. The latest arrival had been in attendance at least six weeks, while many of these children had attended the nursery school for as much as two years. The current quarter was some six weeks under way, so that the student teachers also were relatively at ease.

Absolutely no changes were made in the regular routine of the school, and nothing new was admitted to the teaching lab room except the single, very inobtrusive microphone and the very small, quite silent television camera mounted on a fixed bracket in one corner of the room. No special or unusual lighting was required. Some of the children noticed the camera almost at once, and the more curious even climbed upon the steam radiator, cold at this time of year, to examine the instrument more closely. There was no light or sound of operation associated with the camera, however, and the calm acceptance and minimal comment of the student teachers seemed to satisfy the children's curiosity. Within a moment or two, the children seemed to have completely forgotten the presence of the camera. In any case, if they continued to be aware of the camera or of being observed, they gave absolutely no evidence of concern or uneasiness which the observers could distinguish.

The six student teachers were completely aware of and gave permission for their inclusion in the study and in the video-taping which was requisite thereto. Two or three of them betrayed some initial uneasiness about their being observed in this manner, but opportunities to see themselves in action on the television screen, as well as the fairly quickly acquired assurance that the continuing experience held no threat for them, served to allay their self-consciousness for the most part within a few days. In order to minimize any influence of initial camera shyness upon the study, the first three days' tape was erased, and the observations made on those days were eliminated from the study. In fact, the first week of operations was treated as a period of training both in observation and in operation of our equipment, and of acclimatization for all of the parties to the study.

Forty-eight video-taped lessons comprised the raw material of the study, after those sessions had been excluded which were attended by fewer than three children or which were disrupted by the behavior of a child who entered the sub-setting already upset by a previous experience, or in which the behaviors of the teacher herself were so clearly disruptive that the children's responses could not be attributed to the independent variables under study.

SELECTING AND CODING THE VARIABLES

This study was frankly exploratory and, initially, at least, brought under scrutiny all the features of the sub-setting and of the behaviors occurring within it. Every session was studied repeatedly on a television monitor over a period of several months. It very soon became evident that the level of the children's involvement, as well as the kinds of behavior observed, bore a relationship to the type of lesson which was in progress. That is, the behaviors bore a relationship to the types of concept presentation or learning activity which was intended in the lesson and to the level of physical and/or cognitive activity induced in the group by the teacher.

Activity-Setting Classification

The range of lesson content varied, much as it must in most preschool educational settings, from the sedentary story-hour, through language and concept-development sessions, to various degrees of physical manipulation or large-motor movement, all with varying degrees of cognitive demand. In the process of the study, the lessons were grouped into three classifications, according to activity type and teacher intent, as follows:

A. One group of sixteen sessions included all those lessons which might be expected to be, and which the teachers had intended should be, mainly sedentary. They consisted, in all or in main, of the children listening to the teacher's reading of a story or of relatively passive examination by the children of objects presented by the teacher, with varying amounts of discussion. This group of sixteen lessons were given the loosely-descriptive classification of "Listen, Look, and Talk," and these lessons may at times be referred to as LT or Listen/Look lessons.

B. Thirteen lessons were classified as "Concept Builders" and may hereinafter be known by the abbreviation CB. In the course of these lessons, the children and their teacher observed things and creatures from their natural environment and discussed their characteristics, or dealt with simple comparative concepts. A major criterion differentiating this group of lessons from the listen/look lessons is the degree to which the plan for the lesson required the children's direct involvement, rather than maintaining them as passive observers. For example, two lessons were devoted to the examination by the children of a live frog. There was comparison made between this animal and a toad which they had seen on another occasion. The animal's movements were observed and imitated; its limbs and their movements, as well as the shape and placement of its eyes and other head parts, were compared by the children to their own parts and functions.

Three lessons were given to comparing objects in relation to weight, developing the concept "heavier/lighter", by looking at the objects, lifting them, and/or placing them on a kitchen or balance scale. Another lesson allowed the children to compare themselves in relation to the concept heavier/lighter, but went further by encouraging the children first to guess about the comparison and then to seek confirmation through use of a bathroom-type scale. The same teacher who did this also explored the concept "taller/shorter" with her group, in another lesson, this time encouraging confirmation through use of a tape-measure.

C. A third group, numbering nineteen sessions, included all those lessons in which some type of physical movement was a major aspect of the lesson plan. These physical activities varied, from the small motor manipulative behaviors involved in "making things", to rhythm experiences or movement to music, and were classified as "Make and Do A-go-go" (MG). "Making and doing" included such activities as arranging or balancing blocks, molding play-dough, making birdhouses out of frozen-juice cans and paper cups, painting and pasting, and activating doorbells or light bulbs with batteries.

Behavior Modes

All of the lessons were studied and rated for behavior-mode. That is, the activity-levels induced by the teacher during the introductory portion of each lesson were coded according to the following criteria:

Passive (P) behavior included all listening or watching behavior where little or no demand was made by the teacher for verbal participation or lesson-related response on the part of the children.

Cognitive-Verbal (CV) behaviors included analytical or descriptive verbal responses, either spontaneous (but lesson-related) or in response to questions or remarks directed to the children by the teacher (not including admonition or behavior-desist) or between children, if task-oriented. This category included, also, all behavior immediately following a demand or elicitation by the teacher of responses believed to require such thoughtful involvement even though only one child at a time could respond.

For instance, a teacher who was reading a story aloud might pause and ask the children what was meant by something a story-character had said or why the character had behaved as he had. Such a question required the children to analyze or interpret the behavior and to respond verbally in terms of their own perceptions. Only one child could respond at a time, usually, but it was assumed that all children present were simultaneously involved in the effort to analyze and interpret. Other examples of cognitive-verbal behavior include questions and/or answers by children in which comparisons are made of things and their properties (weight, height, position, color, pitch of sound); in which things not seen or not present are identified from their sounds or descriptions; in which explanations are sought or given, or in which observed or recalled objects or conditions are described. A child might state, about two objects which the teacher is holding, "That block is bigger than this one." Or, "That block is heavier because it is bigger." In the case of the question about the story character, a child might be moved to respond: "The boy is crying because he is sad that he can't go."

Cognitive-Active (CA) behavior consists of analytical or descriptive verbal responses like those described above, in combination with manipulation of physical objects. For example, "This block (which I am holding) is heavier than the other one." Or, "I made my house (painted or built with blocks) larger so more people could come in." Similarly, a response to the effect that an object is larger, or rougher, or softer, or heavier than some other object would be classified as Cognitive-Active rather than Cognitive-Verbal if the child is actively involved with the object. Thus, comments about weight, texture, or taste, for example, following or simultaneous with the child's actual experience with the object about which he is commenting, should fall into the Cognitive-Active classification. Likewise, descriptive comments about something which the child was making or with which he was working, or about something that he is doing (drawing, balancing, putting things together) would be Cognitive-Active rather than Cognitive-Verbal).

The child's physical movements in this type of behavior were expected to be generally small-motor or mild large-motor, but not locomotor in nature.

Cognitive-Active behavior included, also, physical-descriptive or demonstrational-imitative movements, with or without the manipulation of objects. These movements might or might not be in combination with verbal responses but, in most cases, represented an attempt to provide a description, usually of an object not present in the room. This might occur when the child's language was insufficient to permit purely verbal description, or when the teacher actually directed this type of response. For example, a child might be asked to show how an aminal moves or how a particular object falls to the floor.

A sub-category, Active Non-Cognitive (ANC), was developed during the coding process to account for non-locomotor or small-motor cognitive-demand, and was not accompanied by cognitive verbal behaviors other than simple labelling. An example of a lesson with such a cognitively non-challenging behavior content is one in which the children did nothing but form whatever they wished out of play dough. A perfectly acceptable and worthwhile children's activity in proper context, it was considered to have little or no cognitive-demand quality in the context of this frankly education-oriented setting.

Method of Gross Motor (GM) behavior included all locomotive motor behavior which was accompanied by little verbalization such as might be considered analytical, interpretive, or descriptive of the action. This included almost all locomotor behavior, and occurred almost exclusively in response to the direction of the teacher and/or to music or other rhythmic stimulus. Thus, this behavior mode is recorded, for the most part, in "movement to music" lessons.

Method of Coding Behavior Mode

Coding for behavior-mode was based upon the kinds of behavior induced within the activity-setting, by the teacher and/or by the activity, during that portion of the lesson which was considered to be introductory. Initial observations established that the teachers required approximately one minute to collect the children and focus their attention. The next few minutes of the lesson usually sufficed to establish what would be the dominant mode of behavior for the balance of the lesson. The duration of the average lesson was 9.35 minutes. Eight lessons exceeded twelve minutes and, of these, three exceeded fifteen minutes. It was decided, therefore, to wait one minute while the teacher focused the children's attention and to code the subsequent five minutes continuously for behavior mode. Thus, in most of the sessions, one-half or more of the period was coded. In no case did coding extend over less than one-third of the class period.

The five coded minutes were divided into ten consecutive thirty-second segments, and recording was controlled by a time-keeper (the writer) with a stop watch.

Observation of the lesson was maintained for twenty-five seconds of each segment. A judgment was made and recorded, within the last five seconds of each time segment, indicating the number of children considered to be functioning at the particular activity-level represented by the column in which the mark was made. A child's behavior was judged to fall within a particular column if it resembled that description with reasonable consistency for at least fifteen seconds of the thirty-second segment.

The mean coder agreement was 91 percent, and ranged from 83 percent to 97 percent. Agreement checks were made by comparing coding done by two dependent observers studying the same session at different points in time.

Coder agreement was computed by the formula:

$$\text{Number of events discriminated} \div \frac{\text{total number of events discriminated by X plus total number of events discriminated by Y}}{2}$$

where X and Y are any two independent observers (Barker and Wright, 1955, p. 271).

Activity-Setting as Independent Variable

Table #1 shows that the general type of lesson-

TABLE 1-A

MEAN BEHAVIOR MODE PERCENTAGES FOR ALL SESSIONS, ACCORDING TO ACTIVITY-TYPE CLASSIFICATIONS

Class	No. of Lessons	Passive	Cognitive Verbal	Cognitive Active	Active Noncog.	Gross Motor
Concept Builder	13	49.93	38.02	6.77	4.77	.00
Listen, Look, and Talk	16	71.43	21.73	3.27	1.28	2.29
Make and Do A-go-go	19	38.39	13.15	18.84	18.81	10.74
difference significant, chi square, df = 2. $p < .01$			.01	.05	.01	--
All Lessons	48	52.53	22.74	10.38	9.17	5.01

TABLE 1-B

MEAN APPROPRIATE INVOLVEMENT AND DEVIANCY RATINGS FOR ALL SESSIONS, ACCORDING TO ACTIVITY-TYPE CLASSIFICATIONS

Class	No. of Lessons	Appropriate Involvement	Deviancy Rate
Concept Builder	13	80.90	9.35
Listen, Look, and Talk	16	83.12	11.86
Make and Do A-go-go	19	81.71	7.70
difference, chi square (df=2) not significant beyond chance.			
All Lessons	48	81.96	9.53

activity, or activity-setting, constitutes an independent variable in relation to the dependent variable, behavior-mode. Verbal participation on the part of the children is seen to have been higher in the Concept-Builder lessons than in the Listen and Talk lessons, although physical activity levels remained relatively low. For example, children in the Listen and Talk lessons were found to be passive more than 71 percent of the time, but in the Concept Builder lessons, they are rated as passive less than 50 percent of the time. Verbal behaviors occurred in the Listen and Talk lessons less than 22 percent of the time, but constituted 38 percent of behavior in the Concept-Builders. Motor behaviors constituted barely 10 percent of the behavior coded in either of these two lesson groups. In contrast to the other groups, the activity level in the third classification, Make and Do A-go-go, averaged about 48 percent physically active and only 38 percent passive, while barely 13 percent of the behavior reported in this third group was verbal.

Behavior Mode as Independent Variable

The children's behavior, when measured in terms of appropriate task-involvement and deviancy, is seen to be related to behavior-mode but not to activity setting. Although the three activity-type classifications differ significantly in regard to the behavior-modes induced within them, they do not differ significantly overall in regard to appropriate task-involvement and deviancy. (Table 1-8)

While, on the one hand, the behavior modes are seen to be dependent variables in relation to the independent variable "activity setting", they take on the role of major independent variable in relation to the children's responsive behavior.

Props: Independent Variable

A second major independent variable, in relation to the children's task-involvement and deviancy, is the appropriateness of props used during a teaching lesson. Props, of course, are the equipment, toys, tools, or materials used as adjuncts to the lesson. In at least one case, the power of the props introduced in the lesson to induce behaviors which were inappropriate to the lesson, was so great as to make the total session uncodable. The influence of the props upon the course of the lesson was noted to a greater or lesser degree in most of the lessons in the study.

Playroom toys, such as the teeter-totter, might be considered appropriate props for lessons in which new concepts are taught or old ones enlarged upon, so long as the children may expect to employ them in the familiar way to develop these concepts. If, however, they must refrain from using the prop in the familiar way, e.g., from climbing upon this beloved toy whose best known purpose is to be sat upon, the children are being asked to exercise unusual constraint. If, in addition, an object such as the teeter-totter is employed in this manner within a space which is too small to accommodate it along with the teacher and children who are to use it, pandemonium is (and was) the likely result. Similarly, balls are appropriate props for use in a lesson which allows them to be bounced, passed, or tossed. They have been observed in this study to be inappropriate props when they are presented for comparison but withheld from children. Such is the case in a lesson during which the children are asked to state which of two balls is the "bigger one" and which the "littler one", but are not allowed to toubh the balls even when they reach for them.

Objects which produce sounds are good props for a lesson in which the children are asked to identify the objects from the sounds they make. Their implementation becomes inappropriate, however, when the children are still not permitted to see them -- to confirm their identification -- after they have served their original function. Foods, such as apples, are indispensable props when the intent of the lesson is eating and, perhaps, comparison of flavors, juiciness, and textures. They become inappropriately irresistible when the children are expected to compare and discuss but refrain from eating.

In order to obtain a rating of the valence or coercive value of the props, a description of the props and of the plans for the lessons in which they were to be used (a total of 31 lessons) was presented to a panel of six judges. The props were rated on a four-point scale, ranging from a judgment that the props were highly conducive to behaviors appropriate to the lesson purpose, and that they had low valence or coercive power toward non-task-oriented behavior, to an opposite judgment that the props were highly conducive to behaviors which are inappropriate to the purpose of the lesson and had low valence or coercive power toward task-oriented behaviors. The highest rating, indicating that the props used are considered to be the most conducive to appropriate behaviors within the context of the lesson, was given a value of ten points, and

2

TABLE 2

Prop-Rated Lessons N=22

Spearman rank-difference correlations (r_s) of prop-rating and behavior modes with task-involvement and deviancy behavior.

	Appropriate Involvement	Low Deviancy
Prop Rating	.669**	.530**
Percent Passive	-.194	-.063
Percent Cog./Verbal	.021	-.129
Percent Cognitive	.179	.033
Percent Active	.222	.249
Percent Cog./Act.	.540**	.548** (not including Gross Motor)
Duration	.217	.276
Mean C.A.	.041	-.015
Proportion Female	-.106	.118

Duration with mean C.A.: $r_s = .188$
Duration with prop. male $= .256$
Duration with prop. female $= .289$

** $p < .01$

the lowest rating was given a value of one point. Intermediate ratings were seven points and four points. An average of the six judges' ratings for each of the lessons was obtained and could thus be placed anywhere on a continuum from one through ten.

High coder ratings of props were consistently and powerfully associated with appropriate lesson involvement and with very low rates of deviancy behavior on the part of the children in a group of 22 lessons for which statistical independence from other teacher effects was established (Table #2).

Coding the Dependent Variables

The behavior of the children within the task-setting now constituted the dependent variable under study. The behavior was measured in two sub-categories: (a) proportion of appropriate involvement (AI), defined as behavior pertinent to the learning situation and the purposes of the lesson, or as behavior which is expected within this task-setting; and (b) the rate of deviancy behavior (DR), defined as behavior which interferes with another child's appropriate involvement in the lesson or with the teacher's progress in the presentation or development of the lesson.

In the first of these sub-categories, the appropriateness of task-involvement was recorded for each child in the totality of every session. A technique of consecutive sweeps was employed for this purpose. That is, the children in the session under study were observed for the entire duration of the lesson and the level of task-involvement recorded, one child at a time in a fixed and repetitive order. Children were observed consecutively but not for a specific or measured period of time. Observation of each child who was visible was maintained each time only until a judgment could be made in regard to appropriate (or other) involvement. The judgment was recorded by means of a mark in the appropriate column, and observation was then shifted to the next child in order. This method is called "point-time sampling" by Gordon (1966) and used by Kowatrakul (1959).

The second subcategory of behavior studied was Deviancy, here defined as any behavior which interferes with another child's involvement in the classroom activity or with the teacher's progress in the lesson. No differentiation was attempted between "aggressive" and "non-agressive" behaviors. Here, also, an attempt to record differentially between task and non-task deviancy was abandoned.

Coding for deviancy consisted purely of an absolute count of deviancies for the entire duration of each lesson. A simple weighting for number of children affected was achieved by inscribing a mark in the proper column. A deviancy rate per child per minute for each session was computed by the formula $DR = \frac{TD}{C} \div (\text{time})$. That is, Deviancy Rate is equal to the total number of deviancies divided by the number of children, and that quotient again divided by the actual duration of the lesson in minutes and fractions.

Results and Discussion

Although the activity-type classifications are differentiated by their generated modes of behavior, it has been seen that they are not significantly different in regard to mean levels of Appropriate Involvement or Deviancy. That is to say that while modes of behavior (active, passive, cognitive) differ according to lessonptype, the level of children's appropriate involvement in the lesson and the amount of deviancy behavior do not. On the other hand, there is a broad range of ratings per lesson for each of the behavior modes within classifications. For example, among the Concept-Builder lessons, ratings of Passive behavior mode range from 0 to 86.67 percent, with a mean of 49.93 percent.

Table 3 shows the Spearman rank-difference correlations between the behavior modes and the children's behaviors for the thirteen Concept-Builder lessons. Significant negative correlation exists between the percentage of Passive mode alone and Appropriate Involvement ($p < .05$), suggesting that a high level of passivity without cognitive demand tends to result in low rates of appropriate involvement in the lesson. The total percentage of cognitive-demanding modes, however, is positively related to Appropriate Involvement, while the ranking of the combined percentage of the Passive and Cognitive modes is seen to be significantly correlated with appropriate involvement and with low rates of deviancy ($p < .01$)

The Cognitive-verbal mode, from the point of view of muscular employment, remains similar to the Passive mode, which may explain why C/V only approaches significance in its relationship with Appropriate Involvement ($p < .10$). The Cognitive-Active mode, on the other hand (CA), bears significant relationship both to high Appropriate Involvement and to low deviancy ($p < .05$). Thus, it would appear that the addition of some types of movement-activity, in combination with cognitive-demand, may result in higher levels of Appropriate Involvement

TABLE 3

Concept Builder Lessons (CB)   N=13

Spearman rank-difference correlations (r_s) of behavior modes with involvement and deviancy.

	Appropriate Involvement	Low Deviancy
Percent Passive	-.538**	-.209 (% Passive Only)
Percent Pass. + Cog.-Verbal	-.104	-.225
Percent Cog.-Verbal	.374*	.088 (% C/V Only)
Percent Cog.-Active	.593**	.495**
Percent Cognitive	.495**	.154 (incl. C/V, CA, AC)
Percent Pass.+ Cog.	.846***	.736***
Mean C. A.	.779***	.581** (oldest ranked high)
Prop. Female	-.177	.155
Duration	.593**	.764*** (longest ranked high)

Duration with Mean C.A.; $r_s = .628$**

* approaches significance with $p < .10$

** $p < .05$

*** $p < .01$

and lower levels of deviancy.

A significant relationship is also noted between mean chronological age and appropriate involvement ($p < .01$), and between mean C.A. and low deviancy ($p < .05$). This may be an indication of the importance of keying cognitive level as well as the activity level of the lesson, to the age of the children in the group. The significant correlation between lesson duration and the behavior variables is undoubtedly due to the fact that the student teachers are specifically instructed to bring the lessons to a close whenever it is clear that the situation is getting out of hand. This is done both to protect the children from beeing needlessly exposed to excessively disturbing conditions and to defend the student-teachers against unnecessary damage to their relationship with the children.

The correlations between independent and dependent variables in the Listen, Look and Talk Lessons are presented in Table 4. For none of the major variables does the correlation even approach significance. It should be recalled, however, that these lessons are frequently controlled by the use of a picture book, or by the childrens' interest in the story or its plot. Even here, however, there would appear to be at least a

TABLE 4

Listen, Look, and Talk Lessons (LT) N=16

Spearman rank-difference correlations (r_s) of behavior modes with children's task involvement and deviancy.

	Appropriate Involvement	Low Deviancy
Percent Passive	.009	.168
Percent Active	-.091	-.179 (all active modes)
Percent Cognitive	.206	.085 (all cog. modes
Percent Cog. Verbal	.147	.047
Percent C/V + Pass.	.259	.256
Percent Active + Cog.	.293	.187
Percent Passive + Cog.	.291	.212
Duration	-.165	-.018 (longer ranked high)
Mean C. A.	.218	.171 (older ranked high)
Prop Female	.202	.518*

Note: * $p < .05$

tendency, although it does not approach statistical significance, toward a positive relationship between the degree of Cognitive demand and appropriate involvement, especially in combination with physical activity, as well as with low deviancy.

In the MG lessons (Table 5) as in the Cln Concept Builder lessons, the percent Passive approaches significant correlation with high Deviancy, while the total Cognitive mode is highly correlated ($p < .01$) with Appropriate Involvement and with low Deviancy. Passive and Cognitive modes combined are once more associated with Appropriate Involvement and low Deviancy, with the push apparently coming from the Cognitive-Verbal and Cognitive-Active modes ($p < .01$). Once again, Gross Motor and Active-Non-Cognitive modes are negatively correlated with the dependent variables; that is, they are associated with low levels of Appropriate Involvement and with high Deviancy Rates ($p < .05$).

While it was considered desirable to study the effects of the independent variables in the total group of forty-eight sessions, it wasnot possible to establish statistical independence from teacher-effects for the entire group. (Chi square = 4.08 for Appropriate Involvement, and 5.36 for Deviancy

TABLE 5

Make and Do A-Go-Go Lessons (MG) N=19

Spearman rank-difference correlations (r_s) of behavior modes with task-involvement and deviancy.

	Appropriate Involvement	Low Deviancy
Percent Passive	-.214	-.342*
Percent Active	-.167	.012 (incl. all active modes)
Percent Cognitive	.605***	.611***
Percent Cog. + Act.	.470**	.500** (not incl. Gross Motor - GM)
Percent Cog. + Act.	.228	.360* (incl. GM)
Percent Locomotor	-.461**	-.389**(GM and A/NC)
Percent Pass.+ Cog.	.483**	.505**
Percent Cog/Verbal	.837***	.552***
Percent Cog/Active	.598***	.481**
Mean C.A.	.296*	.176
Proportion Female	-.478**	-.226

* approaches significance, with $p < .10$

** $p < .05$

*** $p < .01$

rate; with one degree of freedom, these chi squares are significant at $p.<05$ and force rejection of the hypotheses of independence). Indeed, remarkable naiveté would be required for any assumption that differences of personality and individual approach by teachers could fail to affect the behaviors of the children! This was observably true and must logically be considered true, even though activity-setting factors were powerful enough to permit establishment of statistical independence for the three sub-groupings.

The decision was made to select six sessions from those taught by each of the student teachers for a total of thirty-six. Selection was kept random by coin-toss with replacement. That true randomness may have been achieved is suggested by the fact that the sample thus obtained includes eleven Concept Builders, twelve Listen and Look, and thirteen Make and Do sessions. In addition, the means for all the variables are remarkably similar to those obtained for all forty-eight sessions.

Table 6 shows the results of the comparisons of rankings in this larger grouping, disregarding activity-setting classifications. All relationships are found to be in the same direction as those noted for the subgroupings. Most interesting

TABLE 6

All teachers, six sessions each; Total N=36[a]

Spearman rank-difference correlations (r_s) of behavior modes with task-involvement and deviancy.

	Appropriate Involvement	Low Deviancy
Percent Passive	-.279*	-.307*
Percent Cog. Verbal	.469***	.155
Percent Cog./Active	.354*	.263#
Percent Cognitive	.562***	.286*
Percent Active	-.410**	-.160 (includes GM)
Percent Cog. + Pass.	.396**	.131
Percent Cog. + Active	.537****	.473*** (omit GM)
Mean C.A.	.295*	.187
Proportion Female	-.119	.140

duration with prop. male, r_s = -.119
duration with prop. female = .168
duration with mean C.A. = .038

(a) thirty-six sessions selected at random by coin-toss, confined only to six sessions per teacher.

approaches significance, $p < .10$.
* $p < .05$
** $p < .01$
*** $p < .005$
**** $p < .0005$

is the association of percent Passive in this larger grouping with low levels of Appropriate Involvement and High Deviancy rates ($p < .05$), and the continued association of total percent Cognitive with high levels of Appropriate Involvement ($p < .005$) The combination of Cognitive demand with moderate physical activity (Gross Motor omitted) shows highly significant association with Appropriate Involvement ($p < .0005$) and with low deviancy rates ($p < .005$).

In addition to the classification of lessons according to activity-setting, the data for the forty-eight lessons were divided for purposes of analysis into five groups according to sex-ratio: (1) those sessions in which proportions of boys and girls were approximately equal (e.g., two plus two, two plus three, or three plus four); (2) those in which there were more boys than girls but in which at least one girls was present; (3) those groups in which there were more girls than boys but which included at least one boy; (4) lessons attended by boys only; and (5) lessons attended by girls only.

Over the forty-eight lessons included in the study (Table 7), girls tended to be slightly more appropriately involved (4.91 percent) than boys, while boys show overall a higher rate

TABLE 7 Comparison of Mean Appropriate Involvement levels between boys and girls, according to proportion of boys and girls in each lesson. N = 48 lessons.

		Mean Appropriate Involvement	
Proportions equal	N lessons	Boys	Girls
Concept-Builder Lessons	2	83.21	83.47
Listen, Look and Talk	6	86.26	83.92
Make and Do A-go-go	4	61.32	70.09
Total	12	77.44	79.24
More boys than girls			
Concept-Builder Lessons	2	100.44	97.68
Listen, Look and Talk.	2	82.03	80.94
Make and Do A-go-go	3	103.52	103.56
Total	7	95.76	92.70
More girls than boys			
Concept-Builder Lessons	5	63.12	71.70
Listen, Look and Talk	4	76.85	81.22
Make and Do A-go-go	8	71.39	81.48
Total	17	70.24	78.54

(difference between boys and girls for this group of seventeen lessons significant, p = .025; one-tailed sign test).

Boys only	8	82.91	
Girls only	4		90.60
Total and Great Mean Boys:	44	78.56	
Girls:	40		82.43

(difference between boys and girls for all lessons significant, p = .00023; one-tailed sign test). (Siegel, 1956).

of deviant behavior (21.15 percent). Girls'appropriate involvement levels, also, were found to be higher than the boys' appropriate involvement levels in twenty-three of the thirty-six lessons in which both boys and girls were simultaneously present. This difference between the sexes is significantly greater than might be expected through chance ($z=3.5$; $p=.00023$) according to a one-tailed sign test (Siegel, 1956). Boys' deviancy rates (Table 8) were higher than girls' rates of deviant behavior in twenty-two of the thirty-six lessons ($z=3.167$, $p=.0007$, one-tailed).

The sharpest difference between the boys and the girls in appropriate involvement levels is found in those lessons attended by a larger proportion of girls than boys. This is a group of seventeen lessons which includes five Concept-Builders, four Listen-Look lessons, and eight Make and Do lessons. The probability that girls were more frequently appropriately involved than boys, in those lessons where girls were in clear majority, is significantly beyond chance at the 2 1/2 percent level (sign test, one-tailed). Boys' deviant behavior rates, for those lessons where girls are in the majority, are 61.39 percent higher than girls' rates for deviant behavior.

TABLE 8. Comparison of Mean Deviancy Rates between boys and girls, according to proportion of boys and girls in each lesson. N = 48 Lessons.

		Mean Deviance Rates	
Proportions equal	N lessons	Boys	Girls
Concept-Builder Lessons	2	3.965	2.068
Listen, Look and Talk	6	1.290	2.760
Make and Do A-go-go	4	3.911	3.922
Total	12	2.160	2.840
More boys than girls			
Concept-Builder Lessons	2	1.323	2.285
Listen, Look and Talk	2	1.036	6.480
Make and Do A-go-go	3	4.273	2.285
Total	7	.947	1.578
More girls than boys			
Concept-Builder Lessons	5	3.067	1.471
Listen, Look and Talk	4	6.270	5.954
Make and Do A-go-go	8	3.885	1.654
Total	17	4.206	2.606

(difference between boys and girls for this group of seventeen lessons approaches significance, p = .072; one-tailed sign test).

Boys only	8	3.086	
Girls only	4		2.225
Total and grand mean. Boys:	44	2.978	
Girls:	40		2.458

(difference between boys and girls for all lessons significant, p = .0007; one-tailed sign test). (Siegal, 1956).

Statistical significance was not established for behavior-differences which appeared to be related to differences in sex-ratio except as reported above. Tabled directions, however, suggest that girls tended to be slightly more appropriately involved but also more deviant (31.48 percent) when sex-ratios were approximately equal. Boys appear to have been slightly more appropriately involved and girls to have been sharply more deviant (66.62 percent) in those lessons in which boys were in clear majority.

Trends toward generally more appropriate involvement on the part of girls overall are seen to be continued where sex-ratio differences are examined in the context of activity-setting classifications. The difference is narrower, however, in the Listen, Look, and Talk lessons than in the slightly more child-involving Concept Builder lessons. Rates of deviant behavior, in fact, are lower for boys than for girls in the more passive Listen/Look lessons. The tendency for the sex-group which is in the minority to demonstrate lower rates of appropriate involvement and higher rates of deviancy is maintained.

The effect upon behavior of the activity-setting, that is of the activity-level which is generated by activity-type, is shown clearly by the comparison in Tables 9 and 10. Table 9 combines the data for the twenty-nine Concept Builder and Listen/Look lessons, and shows that the effects of sex-ratio upon the rates of appropriate involvement and deviant behavior continue in the already noted direction. The overall means for Appropriate Involvement and Deviant behavior suggest little difference between the sexes over the twenty-nine lessons in the combined, relatively passive grouping. The more active Make and Do lessons, however, chartdd in Table 10, find boys for the first time consistently lower in appropriate involvement and consistently higher in deviancy rates. The differences between boys' and girls' appropriate involvement rates and deviant behavior rates are significantly greater than might be expected through chance, at p = .018 (one-tailed sign test).

Sex differences. The questions of sex role differences and their possible effect upon children's behavior at the preschool level would appear to be an area in which the need for research is far from exhausted. The suggestion springing from the data herein that imbalance in the proportions of boys and girls in a classroom setting may trigger inappropriate and deviant behaviors

TABLE 9. Comparisons of Boys and Girls Appropriate Involvement and Deviancy levels, according to activity-type classifications.

Listen, Look and Talk lessons and Concept-Builder lessons, combined. N = 29 lessons

	N	Mean Approp. Involvmt. Boys	Mean Approp. Involvmt. Girls	Mean Deviancy Rate Boys	Mean Deviancy Rate Girls
Proportion equal	8	85.49	83.81	1.959	2.587
More girls	9	69.22	75.93	4.490	3.452
More boys	4	90.07	84.56	.589	2.191
Total	21	79.39	80.57	2.783	2.882
Boys only	5	80.77		2.525	
Girls only	3		91.77		2.893
Overall Mean:		79.68	81.97	2.788	2.893

TABLE 10. Make and Do A-go-go lessons. N = 19.

	N	Mean Approp. Involvmt. Boys	Mean Approp. Involvmt. Girls	Mean Deviancy Rate Boys	Mean Deviancy Rate Girls
Proportion equal	4	61.32	70.09	3.911	3.922
More girls	8	71.39	81.48	3.885	1.654
More boys	3	103.52	103.56	1.424	.762
Total	15	75.13	82.86	3.400	2.080
Boys only	3	86.47		1.849	
Girls only	1		87.10		.000
Overall Mean:		77.02	83.12	3.142	1.950

Difference between boys and girls in 19 Make and Do lessons significant for both appropriate involvement and deviancy, $p=.018$; one-tailed sign test (Siegel, 1956)

Differences between boys and girls, comparing combined LLT/CB lessons to MG lessons: for Deviancy, $p<.05$; approaches significance for appropriate Involvement, $p<.10$. (X^2, df=1).

in the members of the minority sex group is a tentative hypothesis which begs for further investigation.

The finding is reported for the present study that girls tended overall to be more appropriately task-involved and boys to be more deviant in their behavior. These directions are maintained, and the magnitude of the difference sharply heightened, in the more active Make and Do A go-go sessions. In the Listen and Look sessions, the highly passive and cognitively undemanding sessions, the girls were seen to be slightly more appropriately involved than the boys but sharply more deviant.

These findings meet an interesting parallel in the report by Charlesworth and Hartup (1967), who studied the manner in which children's behaviors were reinforced by the responses of their peers within the nursery school. They report that girls engaged in mutual social reinforcement behavior more than boys in sedentary activities, while boys "engage in a larger proportion of social reinforcing peer interaction during dramatic play than girls." When the findings of that study are related to those of the present study, it can be seen that our girls reinforce each other both in appropriate involvement and in deviant behaviors during the sedentary Listen and Look lessons. The same was clearly true for the boys in those lessons which involved more dramatic play and motor activity. In fact, these influences seem clearly to differentiate between the more passive and the more active lessons in terms of the different levels of appropriate involvement and deviant behavior induced by them in boys and in girls.

Conclusion

It has been shown that the modes of behavior --- levels of physical and cognitive activity --- generated in each of the lesson types during the introduction to the lesson significantly differentiate each of the activity-setting classifications from the others. It is also shown that the average level of child-initiated behaviors --- task involvement and deviancy behaviors --- for each classification does not vary significantly from the average level for all groups. This is taken to be a clear demonstration of the assumption that "the behavior of the child at a particular time does indeed depend more directlly upon the situation than upon the setting in which ittakes place". (Wright, 1960). It is to the nature and conditions of the situation, therefore, that we must turn in order to understand the behaviors. The results of this exploration are reasonably consistent in their message. They indicate that nursery school children observed in the course of this ~~study~~ within an activity-setting in which they are physically passive and cognitively uninvolved, except when their attention is held by an audio-visual device such as the story book, are not likely to be highly appropriately involved in the lesson activity. They are also more likely to interfere with another child's lesson - involvement or with the progress of the lesson than they might be in a lesson which demands of them a more active participation. Results also indicate with relative consistency that activity settings in which large motor or locomotor activity is induced, when this activity is not directed by or in the control of the child's response to the lesson's cognitive demands, may be expected to generate low levels of appropriate task-involvement as well as high levels of deviant behavior on the part of the children.

On the other hand, when the passive mode of behavior is appropriate to the task-pattern, and when it is in combination with demand for cognitive commitment, high levels of appropriate involvement and low levels of deviant behavior result. Likewise, when moderate physical activity is appropriate to the task pattern, and when excessive locomotor behavior in such activity is avoided, appropriate involvement and low deviancy rates result. Even more dramatically demonstrated is the likelihood that, when moderate activity levels are combindd with a demand for cognitive involvement on the part of the child in the type and level of his physical activity, very high levels of appropriate task-involvement and very low deviancy rates result.

Kounin stated (1966) that the "...management of behavior in classrooms ... is a function of the techniques of creating an effective classroom ecology." The study here reported may claim little more than exploratory value, and is on much too small a scale to pretend to predict for other settings. Certainly, the suggestion~~s~~ that sex-group imbalance~~s~~ influences behavior in these groups requires more investigation before inferences may be considered. If the results of the present study may in any way be generalized, however, it would seem to behoove the nursery school teacher to select with care the materials which are to be present in the setting or employed within the context of a lesson. Careful structuring of the activity - setting and selection of the objects within it, as well as thoughtful pre-planning toward the maintenance of age-appropriate cognitive stimulation and activity levels, appear to be the master keys to the inducement of appropriate task-involvement and the avoidance of deviant behavior on the part of pre school children within a learning-activity setting.

Epilog

In the study which has been described, we find ourselves looking at broad aspects of the behavior-setting; for example, types of lesson-activities and the kinds of props used in the context of the lesson. We are looking, also, at the behavior of the children within the context of these setting factors.

In reality, however, we are looking at the total style with which a teacher has structured a situation, utilized the materials of the lesson, or involved the children -- in terms of the behaviors of the children within that total context. We are here measuring behaviors of children, rather than of teachers, but mindful of the fact that the teacher, and her methods of inducing and inhibiting behavior, is a crucial force in this ecology.

It must be one of the more obvious truisms occurring to anyone watching different teachers in their classroom behaviors that there are distinct differences in the ability of teachers to affect children's behaviors in desired directions. Are these due to differences in teacher personalities?

It would seem more fruitful to study the kinds of things that effective teachers do, rather than to concern ourselves with the differences in teachers' personalities. That is, if we can define the differences. At the same time, it would be useless to deny that the investigators in this study were deeply impressed with what seemed to be an overriding quality in one student teacher who stood sharply out from the others in her superior effectiveness. This singular quality, if one attempts to define it, might be described as "respect for children as worthy individuals," and seemed to be returned in kind by the children in their response to their teacher.

This "respect" on the part of the teacher was manifested in her consistent habit of addressing each child by name, of looking directly at the child, even orienting her body toward the child with whom she was speaking, and in her reasoned deference to the children's interests in the direction of her lesson. It was manifested in her intuitive reinforcement by word and glance of desired behaviors, and in her warm but firm discouragement of behaviors which were undesirable or disruptive. Her respect for the children and their individual abilities was further manifested in her consistent demand for thinking activity, in her persistent and thoughtful challenge to each child to explain what he meant in his remarks, or to put into words the meaning of his physical movement. In short, she elicited from the children, most effectively, all those kinds of behaviors which we were finding to be most clearly associated with high levels of appropriate involvement and low levels of deviant behavior.

Truly, this teacher behaves as she does because it is part of her personality development, but it is her behavior which is effective in producing desirable learning-oriented behaviors in the children. It is her behavior that is worthy of study and, perhaps, of emulation. Further understanding of this broad concept of respect, if that is what it is, and of the effects of these specific behaviors upon others in the school setting, demands further research. So also does the question whether evaluation or study of these behaviors can or should be separated from the continuing attempt to gain understanding of the construct "personality."

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MATERIALS AND PROCEDURES FOR ASSESSING COGNITIVE DEVELOPMENT IN PRESCHOOL CHILDREN

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A little more than 5 years ago, the New York City Board of Education approached Educational Testing Service with a request to cooperate in a joint effort. They asked us to find ways to help their first-grade teachers better understand and assess the intellectual development of their children so that they could teach each child more effectively. The result of these efforts was the development of the "Let's Look at First Graders" materials.[1] More recently, the Early Education Group has been working with 4 and 5 year old children, and we continue to be convinced of the necessity to involve the teacher directly in the assessment process. It is our hope that, by relating theory to practice, we can help to produce a more effective combination of testing and teaching. In a sense, we are interested in repeating history: if you recall, historically, the first intelligence tests were validated against teacher judgment. Unfortunately, since that time, there has been an increasing distance between the test-maker and the test-user and tests have been used largely as measures of achievement rather than for diagnostic and instructional purposes. Thus the traditional testing at the end of the year offers little useful information to the teacher regarding the instruction of her children during the year.

Our concern with the use of evaluation which would be useful to the teacher has been implemented in several different ways during the past few years. One approach we have used has been to ask teachers to tell us about what they have observed in their classrooms. For example, "What kinds of things have you seen a child do that made you think..."that child is 'smart'?" During the New York City project, we interviewed more than 100 first-grade teachers and collected behavioral illustrations which were then incorporated into a teacher's guide for directed observation. This guide drew heavily on the theoretical framework of Jean Piaget, the eminent Swiss psychologist, and it was our attempt to translate theory into teacher language.

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[1] These materials are currently available through ETS. Inquiries should be directed to: Cooperative Tests and Services, Educational Testing Service, Princeton, New Jersey 08540.

One of the unexpected dividends from these visits to schools was an incident that illustrates how much we still have to learn about what may be referred to as the quality of children's thinking. The class was out on the playground and we were chatting with the teacher. A little boy came running up, all excited, and said "Teacher, Teacher, Jimmy is shaking a worm in front of the girls and making them scream!" The teacher tried to calm him down and asked: "Do you think that's a bad thing to do?" "Yes, ma'm!" he said, "Worms don't like that!"

Another approach to help teachers develop useful evaluation techniques was to suggest various ways of eliciting meaningful intellectual behavior. It is apparent that some behavioral signs cannot be seen by just waiting for them to happen. Some of them--often important ones--have little chance of happening in the ordinary course of events in the classroom or on the playground. It is also apparent that there are some children who simply withdraw from the usual classroom situation and reveal little overt behavior of any kind. In this approach, we incorporated various materials, games and activities which were designed to elicit particular kinds of behavior. The choice of which behaviors to elicit was largely influenced by theoretical considerations, e.g., some of these tasks were adaptations of Piagetian measures and others were developed from disciplines such as psycholinguistics.

Still another approach to assessment has been the development of a more objective and perhaps more "test-like" set of materials called the Written Exercises. The Written Exercises are similar in some ways to existing tests, but they contain at least two important distinctive features. First, the exercises are related to various theoretical concepts in the behavioral guide. Specifically, they are designed to tap the child's understanding and developed ability in the areas of:

- Shapes and Forms
- Spatial Relations
- Time Concepts
- Mathematics
- Communication Skills
- Logical Reasoning

Secondly, they are designed to give the child extensive practice before any "measure for the record" is made. In each of the areas listed above, there are actually five exercises, one to be given on each day of the week. The first three are for practice and instructional purposes; only the results of the last two assessment exercises are recorded by the teacher. By this procedure, the child is given an opportunity to become familiar with the mechanics of "test-taking" and some experience with those concepts which we consider important enough to test. The use of this approach is particularly helpful to those children who have had little experience with paper and pencil tasks.

For each set of written exercises, the administration manual gives instructional suggestions on how to use the first three exercises for instruction. We have been fortunate in having other investigators conduct research using our materials, and it is particularly gratifying to report on the work done with the written exercises by Nadine Lambert and her students (University of California). In one study, they used the 4th and 5th exercises as pre- and post-measures. The group below the 25th percentile on the pretest was given instruction with the first three exercises, following the suggestions in the manual. There had been significant differences of race and socioeconomic status in all six areas of the pretest, but all of these differences were drastically reduced in the posttest, so that many of them were no longer significant. This suggests that "teaching toward the test" by giving instruction on how to understand test directions such as "find the one that is most like..." may be an important factor in affecting a child's performance.

Thus in our work with teachers, we have been concerned with the development of measures which give teachers information which may be used for instructional purposes. We are particularly interested in sensitizing teachers to the need to look at a child's performance under a wide variety of circumstances. Surely, if there is a need for instructional programs geared to meet the needs of individual learners, there is an equal need to consider the use of individualized assessment, that is, to look at a child's performance in many different ways. For example, in looking over much of the research on perceptual development in children, it is apparent that in order to make comparisons, we need to identify three different types of performance. First of all is child A, who cannot do the task regardless of the kind of material and circumstances. Then there is child B, who can do the task, but only under certain kinds of presentations and with certain kinds of materials. And then surely there is child C, who can perform on a task and demonstrate his competence regardless of the circumstances. It is child B who represents a large proportion of any group of children, and he is the child who is the victim of the usual testing procedure. For example, such a child may be given one test on classification skills and if he fails, it is assumed that he cannot classify. In general, the conditions and parameters of a particular test are carefully described by the investigator or test-developer, but it is a rare teacher who remembers that a test is limited to a particular set of materials and a particular set of procedures.

The preschool child is especially vulnerable to this type of misuse of test results because the usual time limitations of the one-to-one testing situation severely restricts the number and variety of assessment procedures possible.

In contrast to the researcher, the preschool teacher is in the unique position of having the opportunity to observe the child in a variety of situations over a long period of time. Thus in our work with teachers, we are suggesting the use of various combinations of assessment techniques. Such procedures as the following may be embedded into the curriculum and provide constant feedback into the instructional program:

1. The use of observation in routine classroom situations (e.g., sorting behavior in putting materials away).
2. The use of structured situations as additions to routine classroom activities (e.g., using a double easel to set up a task to observe spatial egocentrism, that is, the child's ability to visualize another point of view).
3. The use of demonstrations based on translations of Piagetian tasks (e.g., water level and conservation tasks).
4. The use of games which may be played by large groups, small groups and individuals (e.g., Directions Card Game from the New York City materials).
5. The use of classroom materials which are systematically varied (e.g., classifying with actual objects, photographs, pictorial materials, abstractions, language, etc.).
6. The use of different ways of asking the question (e.g., varying the verbal content of tasks, looking at category range as well as sorting behavior, etc.).

7. The use of different types of performance
   a. In terms of the type of task, i.e., some tasks ask for preferential behavior, whereas other tasks ask a child to respond to a "demand" situation. For example, the first type of classification task asks the child to demonstrate how he *likes* to put things together, and the second type insists that he find "all the things that are red."
   b. In terms of the mode of response, e.g., pointing, marking a multiple choice item, constructing a response using language or actual materials. The type of response required of the child often determines the level of difficulty of the task--*recognizing* the correct answer in a multiple choice item is usually less difficult than *constructing* the correct response.
8. The use of different ways of looking at the child's answers:
   a. If the child answers correctly, how sure is he of the answer? Example: the use of clinical probing on some tasks patterned after Piaget's approach.
   b. If the child gives a wrong response, in what ways is he wrong? The understanding of the child's wrong answers is a critical factor in the development of appropriate instruction. Example: the classification Block Test in the preschool research at Educational Testing Service.

It is my personal belief that an educational researcher must feel a responsibility to work with teachers to find ways of implementing theory in the classroom. The following slides will illustrate some of our attempts in this direction:*

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*Comments on slides given extemporaneously.

Slide Presentation

1. Samples of children's drawings on the Water Level Task (adaptation of Piagetian task).

2. Spatial egocentrism tasks.

    a. Diagram for using a double easel as classroom activity.

    b. Sample test items from the Written Exercises.

3. Time sequence tasks.

    a. Student and teacher sets of sequence cards: used to elicit oral language as well as ordering behavior.

    b. Sample test items from the Written Exercises.

4. Classification tasks.

    a. Directions Card Game, with sets and subsets based on color, shape and number discrimination. Feedback is built in.

    b. Classification Block Task: Set of four picture blocks which may be sorted by color, shape, utility, category, two-attributes and three-attributes.

5. Language tasks.

    a. Samples of ETS Language Comprehension Cards (adaptation of Roger Brown's task on receptive language understanding of tenses, prepositions, negations, etc.)

    b. Samples of ETS Story Sequence Cards: Sets of picture cards used to observe sequence comprehension, oral recall of story, and child's story telling with own selection of cards.

6. School Path Task. (Pegboard adaptation of Piaget's distance conservation task.)

UNITED CEREBRAL PALSY OF QUEENS YOUNG INFANT PROGRAM

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INTRODUCTION

Now that education for culturally disadvantaged children is a fact, a new challenge arises for educators: To find the way to get right on target in supplying early recognition and learning to the physically handicapped child who is culturally disadvantaged. His deprivation is all-consuming because he cannot explore his environment on his own. He is not disadvantaged due to his socio-economic structure (although in many cases, even that can add to the child's burden), but due to his physical and neurological structure.

It is not easy to decide just what kind of pre-school curriculum will work best. Since no two youngsters are handicapped in the same way, there is no pat method to follow. A program, that contains sensory motor stimulation, perceptual training, self-help, and enrichment experiences, which is geared to the cognitive needs of the disadvantaged, is important. Because of their lack of ability to achieve according to adult expectations, there is a need to establish a pattern for: (a) behavior, (b) movement (c) learning and (d) a motivational drive for future achievement.

The parents learn to experience a series of victories and failures. They have to watch the painful, slow progress of their child. It is, therefore, not enough to change the parents' feelings of guilt and frustration to those of passive acceptance. What they need is a longitudinal program which assists them to understand, accept, plan together and work in the limitations of their child, and to learn improved means of coping with the problems developing out of their child's disabilities. At the same time, the handicapped infant and young toddler should receive early stimulation leading toward improved awareness and interest for his environment, independence in A.D.L., social adjustment and sensory exploration. Many youngsters have spent too many years without stimulation, flat on their backs. In an effort to do something about the problem United Cerebral Palsy of Queens for the last three and a half years has been operating an experimental program constructed to meet the needs of the total family.

YOUNG INFANT PROGRAM STRUCTURE

Parental over-protection, which later many professionals see manifested as the children's fear to use their bodies, has not been firmly transmitted to the infant age group as yet. The handling patterns can be changed if a program of help is offered to parents as well as to the children.

The basic structure of Y.I.P. provides a three day a week service from 9:00-12:00 for twenty five physically handicapped children and their mothers. They are referred to our Center by community agencies and hospitals where the children are in the process of being diagnosed. Counselling and guidance are conducted three mornings a week under the direction of the Psychiatric Social Worker. Two parent sub-groups of ten mothers each meet Monday or Tuesday and in larger educational groups twice a month on Thursday. The major thrust in this activity is that of providing supportive counselling in a group frame work, enabling the mothers to cope more successfully with their role of mothers and wives. On the second day of mothers' attendance, they are assigned a morning of mother service in the classrooms or therapy rooms of our older handicapped school population. This experience provides them with the opportunities to observe the developmental sequence in older children and to assume an active role in the total agency program. The fathers are scheduled for two evening discussion group meetings each month. We find that special group sessions limited to fathers provide unique opportunities. 1. To see what knowledge has been transmitted from the mother, which, in turn, encourages better husband-wife communication. 2. To develop a father-child relationship. 3. To balance the mass guidance given to single members of the family, which, in most cases, is the mother. We have just initiated couples group meetings as a result of the request of some of the parents.

While the mothers receive the services noted above, the children, who are all under medical supervision at approved hospital centers in our Metropolitan area, are being worked with by a team of seven advanced graduate students from the Departments of Special

Education and Early Childhood from Metropolitan Colleges and Universities. Their work with the children is supervised by myself and (on the spot) by our language and educational therapist. We have a ratio of one teacher to four children. I will discuss curriculum later.

United Cerebral Palsy of Queens employs a Registered Nurse as a Home Service Coordinator. She travels to the infants' homes to instruct or check on prescriptive home programs related to activities of daily living. She gives advice on modifying equipment and home physical handling of the child. This service has provided a supportive re-inforcement for the mothers in their work with their child.

Since teaching and evaluating young multi-handicapped children is so difficult, we have found that it is important for staff to become trained in observation while working with the youngsters. Decisions should always be qualified by the complicating factors: 1) the extent of the disability which modifies other behavior, 2) fatigue due to working under a severe handicap, and 3) the lack of adequate experiences imposed by the handicap. After each teaching session, staff had made it a practice to immediately recap the morning's activities. Comments are notated in reference to child's response and teaching methods. Further modifications or additions are added to the curriculum at this time. Although a curriculum is set, it is continually being created and adapted by total staff as they gradually observe and evaluate the youngsters at work and at play.

Recommendations as to further medical testing may be suggested and our Social Worker will make the necessary arrangements. Twice a month our staff is brought up to date on the mothers' and fathers' reactions. In this way we guard against teachers becoming too child centered and reenforce the team process.

CURRICULUM AREAS

Handicapped children start life with certain inborn physical and mental potentials that can become retarded due to developmental lags. Their biological time schedule is impeded. Teachers and therapists must know the normal maturational timetable so that they can introduce and teach the developmental stages. We must create ways of stimulating, reinforcing, structuring and modifying the children's environment, so that motivation, adaptataion and learning can proceed with as few gaps and frustrations as possible. Normal infants gradually become master of their bodies as their reflex and their undirected movements are replaced by voluntary ones under their control. At a year, 18 months or older some of our motor handicapped children can not even lift their heads to look around. They cannot support their weight on their forearms. Those children should be placed on a mat with a padded roll under their arms for support in order to develop motor patterns and strength. They should be helped to roll over from stomach to back and back to stomach, providing them with motivation to do so. Sitting is also a very important area of evaluation so that they can feel secure and view the world from another position. Creeping and crawling should be done as a group activity to develop more body movements. Some will need to be manipulated so that they can get the idea. A physical therapist should be consulted for proper reciprocal pattern. If children can ambulate independently or with assistance, opportunities should be presented to them so that they can gain further mastery.

The snack period is an excellent time to evaluate any eating and drinking difficulties. The activity can be done in a group, awakening the children to new tastes, textures, and feelings. If children need to gain control over their speech musculature, sucking and sipping activities should be encouraged. The teacher may have to cup a child's lips to give him the idea of puckering, at the same time pushing down on the cover of the cup to force liquid to the surface. Tell the child to kiss the straw (if he knows what a kiss is). If a cup is introduced for the first time, put water or juice in it. For the infant who needs more sucking, we have found the cup should be used as a bonus and not a substitute for the bottle. Utensils can be introduced and adapted for the beginning of self-feeding. We believe that if we encourage activities like this when the child shows readiness, we can help the child to learn that he can do some things for himself. This will build the first layer of independence. An occupational therapist can be consulted for detailed instructions.

When the children first enter the room, they can be taught to take off their hats. The severely involved child can be made aware of the action by doing it with your hand on his. The more able child might learn to take off his coat. Some children can manage at least one sleeve. At the end of the session, the process should be reversed. Remember it is easier for the young child to undress than dress. Consistency and independence should be encouraged.

Clean-up time gives us a wonderful opportunity to demonstrate cause and effect. "What do we do when our hands are dirty?", the teacher asks. "We wash them to make them clean." Discussion around water, "hot, cold, soap, etc."

The beginning language comes when the child makes a sound and that sound brings a response from his parent or teacher. He may not continue to make sounds unless he experiences its power. His babbling activities should be encouraged and imitated so that he will have an interest in continuing. Our group oral activities include the naming of objects, pictures, people and body parts.

Each child has a notebook with pictures, of his family and familiar items. It is used for individual language stimulation. Some children, with normal hearing, due to severe involvement of the speech musculature, may never be able to speak intelligibly. Their inner language must be developed to the fullest. Through matching and categorizing activities, etc., this will provide them with the ability to think. They should be talked to even though a feed-back is not possible. The teacher must take the time and interest to know the child so that she can establish a means of communication. When our children show a speech readiness, we provide them with individual speech therapy.

The children of the Young Infant Program are trained by some of the Montessori principles. They are given many exercises allowing for the development of sequential movements which stregthen memory and help them to learn their body parts in relation to space. Some of the Montessori tools have helped the children learn how to control fine motor movements and to coordinate eye and hand. Children learn order when a portion of the activities are structured to firm rules, dealing with the use of the didactic materials as well as respect for the rights of others in the group.

One of the glaring lacks in the education of the handicapped has been the absence of a curriculum that teaches such children to think and to draw conclusions. Because of this, our Young Infant Program utilizes some of the Piaget's principles. We feel it is never too early to develop thinking patterns in the children so that they can draw upon their senses in order to reach conclusions. Our children learn that an object can have more than one property through the use of a one-for-one matching and a multi-sensory approach. When teaching the common fruits to a 2½ and 3 year old, an apple was first introduced. It was looked at, handled, smelled and tasted. The second fruit, a banana, was introduced in the same manner. Later in the unit, both were exhibited and experimented with in the same way so that discrimination could be tested. Many levels of development were discovered during these lessons. Not all were able to perceive the differences. Variables are introduced gradually to aid us with our educational differential diagnosis.

The actual validity of our teaching methods used by our teachers can only be determined when they are confronted with the child and his limitations. They should be flexible and inventive enough to try almost anything that will enable the child to respond in some revealing way to the activity. The teachers should follow any lead or clue the child gives and be ready to respond to it. The children's sitting position should be made comfortable so that they are not expending all their energy in fighting for their balance. One child may need an adapted chair with arms, foot rest and seat belt. Some sit better in braces if they have them. The children may also need a brief relief from the strain of sitting. We do a great many of our activities on the floor.

The teacher may have to actually help the child to grasp and close his fingers around objects to steady his hand and head. They may have to manipulate the activity with a child, guiding his hand so that he can experience a measure of success. The child's response to his success may also indicate his insight into the task. This is much more significant than his inability to perform the task unaided.

Unless there is a definite sign of readiness, toilet training should not be undertaken. A Home Program is established by our Home Service Coordinator. The mother is instructed in the use of the proper toilet seat - the need for consistency without a battle of wills. The use of training pants (no diapers) and a proper name for the function are of great importance. Parents should be warned that the apprehensive child may be frightened by the flushing or the height of the seat. In order to maintain a carry-over, the nurse will acquaint the center staff with the child's toileting habits. In this way, we have given aid in toilet training of most of our children in the center.

CONCLUSION

The object of the Young Infant Program is not to make the young children robots that automatically are programmed to our commands. Instead, we wish to help them through the patterns of developmental maturation. This requires that their teachers and parents respect and value the children's personalities providing them with a self-concept that transcends the extent of their handicap. We hope that this program will help to prevent what we have too often been faced with in the past, the unattainable and unrealistic goals that have been imposed upon the handicapped child by parents and educators.

THE BRITISH INFANT SCHOOL PROGRAM

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The British Infant School serves children ages five to seven years. Since there is no one program followed by all schools, this presentation will describe all the signification manifestations of the Infant School Movement. It has grown gradually and in an eclectic manner since World War II. It represents a large part of the public school system of England .(1/3 remodelled, 1/3 affected, 1/3 unchanged) and takes a variety of forms in an increasing number of schools throughout the country.

In the past quarter of the century in England, there has been a steady decline in rigid intellectual training in early childhood programs. Culturally, there has been no pressure on educators to step up the intellectual achievement in Elementary Schools, but rate a wide spread National concern to desegregate the social classes and eliminate early acquistion of academic skills at the expense of emotional, social, and aesthetic development.

The assumptions of teachers who have worked to develop the Infant School have been affected by the National climate. BritainIs voice in International affairs will no longer be materially determined. The English who believe Britain still has a voice realize that her influence depends upon what she has to say. Creativity and divergent thinking have become very important goals for Education.

There is concern for whole-child development for indepndent thought and action. There is an assumption accorded support by the theories of Jean Piaget that children grow in a natural sequence of stages. It is not in the interest of the child for the teacher to accelerate the emergence of these stages. The principal assumption that pervades the Infant School model which is different from other models is that, given freedom and appropriate environmental stimuli (including those coming from the teacher) the child can be trusted to develop self-paced and self-motivated in the way most suitable for him. Since no child is quite like any other child, no very specific expectations can be held concerning the individual style which determines what, how much, and when he will learn. The far reaching implications of this assumption have resulted in the uniqueness of the heterogeneous grouping, the integrated character of the curriculum and informality of the program. structure which are all designed to allong each child to develop in his own way. Careful observation of the child gives the teacher the clues to the discoveries of his individual needs.

GOALS

The British Infant School has as its primary long-term goal the preparation of children for life through living. An important goal, therefore, is to design the environment so that the child can interact freely with it in the greatest number of ways possible in order that he might express himself.

The short-term goals grow out of the observation of this interaction. The child is taught to understand only what he is ready to believe.

The words "understanding" and"believing" themselves indicate classroom goals. Teachers agree with Piaget that understand and believing of what they learn, depends upon the stage of development which they have reached. Attempt is made to maximize the characteristics of each stage in exhaustive horizontal development.

CURRICULUM

The Infant School is child centered, and the teacher plays an active role in the classroom. Great use is made of materials but these are very often obtained from the real world. The children gain practical life experience through helping other children as well as by seeking help of others in actual life situations. The children learns as much from interacting with each other as they do from the materials. Careful preparation of the classroom by the teacher is, nevertheless , an important part of curriculum design.

The Infant School requires that the child be allowed to function in a large number of ways in a variety of situations. This is done by use of an integrated curriculum. The child's interests are the starting points for his progress in school. He is free to explore any aspect of his surroundings in all its possible ramifications. The freedom in the curricular experiences enables the teacher best to capitalize on the child's desire to learn. It also enables her to study the child as he expresses himself in his behavior so that she can steer him to experiences that will be most beneficial to his development.

Academic skills of reaching, writing, and math are considered very important in the Infant School. Concern for their emergence in the child, however, does not stem from an early learning goal. The optimum time for each child is sought. When that time comes, if the enviornment has given the appropriate stimulus, the child will express the desire to become master of a symbols system. At this point the child can learn fast and make extensive use of the materials provided for his stage of learning.

Reading is encouraged by the provision of manu bppls. both stories and informative books, displayed attractively on open shelves --forming on one side a secluded corner, colorfully furnished with inviting cushioned chairs and a soft carpet. Similarly with number concepts, there are many attractive games to play at the classroom "Shop" or in the staging of a dramatic performance with seat bookings and programs for sale. Intellectual learning is centered around concept formation and to this end the child has materials to manipulate by himself, e.g., sand, water, blocks, woodwork bench, paint, paper , crayons and pencils, all of which provide multiple learning experiences.

Subject areas do have their manifestation in the provision of work surfaces around the classroom for particular activities such as weighing and measuring; experimenting with pulleys, batteries, or magnets; making collages, painting, or using clay; and displaying collections. Materials used in these activities will come from junk materials collected from home. Junk material, besides being inexpensive, has the value of not being directive to the child as to its possible uses, thereby giving him the greatest freedom for creativity.

Learning in human relations, role identification, imitation, creativity, languate--all have their expresion in a corner provided for dramatic play. This is usually an area marked off by a screen with windows forming a "Wendy House." In it are dress-up clothes and toys suggestive of play situations.

Creative self-expresion through movement, drams, music, art, and writing is a very important part of the curriculum. It provides the teacher with deep insight into the individual child. Physical education, in addititition to movement, takes place through experiences with gymnastic and playground equipment encouraging climbing, swinging, balancing, and general large muscle control.

Writing has been left until the end of curriculum description because it grows out of all the other activity described. The children are shown the value of written communication in as many situations as possible. There is little training in caligraphy since written language is considered primarily communication, and provided that it is legible, size and style are considered matters of personal preference. Writing has the important function in the classroom of being a means of recording experience. It focusses the child's attention on what he has achieved, provides a record for the teacher, tells her what the child has discovered, whether it is factual reporting, recording communication, or creative expresions.

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Demonstration classes of the model described above are open to visitors. If interested, contact Professor Bernard Spodek, Department of Elementary Education, The University of Illinois, Urbana, Illinoic 61801.

Promoting Emotional Growth in Early Childhood

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"Everybody is so different--but still we're so much alike", thought Beverly. "We all like to feel good--but different things give a good feeling to people." Seven year old Beverly has just returned to her desk after participating in another "Magic Circle", an experience she has enjoyed daily since pre-school when her school adopted the Human Development Program. Last week the "Magic Circle" activities had led Beverly to observe to herself that there was only one her--although that both pleased and intrigued her. She has become self-confident to the point that she is glad to be herself, yet respects others for their own individuality. Beverly is progressing in her emotional development as planned.....

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introduces the
HUMAN DEVELOPMENT PROGRAM

The Human Development Training Institute was formed in 1967 for the purpose of training educators to facilitate the emotional development of children through effective communications. The strategy is to utilize the cumulative, sequential daily activities outlined in the Human Development Program lesson guides. The vehicle is the "magic circle" --a technique incorporating group dynamics for children in the classroom.

THE HUMAN DEVELOPMENT PROGRAM...

is a curricular approach for the elementary classroom which is designed to give children the opportunity to become constructively involved in developing their own personal effectiveness, self-confidence, and an understanding of the causes and effects in interpersonal relationships. The program capitilizes on the basic drives of children to achieve mastery and gain approval. The program is predicated on the assumption that the development of a healthy self-concept is the incentive for children to strive for further self-realization; and success increases motivation for further success in an ever-upward spiral.

The Human Development Program incorporates what master teachers do every day to instill responsibility and self confidence in children in a systematic plan thus reducing the chance factor for growth in the affective domain. The organization of the lessons anticipates and provides for sharpening of the tools needed for effective adjustment before those strengths are needed for success in academics and the other challenges of life. The child learns to appreciate what others do for him. And he is permitted to be honest about his resentments, instead of learning to deny their existence or to repress them. For twenty minutes each day the learning climate for the children is open and free. Security is in the "magic circle."

THE MAGIC CIRCLE

In the "Magic Circle" the children and their teacher, who serves as leader, verbally explore themselves and each other each day through group interaction in activities related to specific goals. These goals are met by using group techniques tailored for elementary school children.

Throughout the twenty minute session an atmosphere of acceptance prevails. Children are encouraged to share their feelings genuinely and to learn to listen and observe others.

The teacher's role is to begin the activity by explaining the topic for discussion and if necessary to demonstrate what is expected of the children by "going first". After each child has had an opportunity to participate the teacher helps the children to review and summarize what was learned in the session. Progressively the teacher says less in each session--giving more of the responsibility to the children as they are ready to assume it. Sample "Magic Circle" topics are:

"It made me feel good when..."

"I made someone feel bad when I..."

"Something I do very well is..."

"What can I do for you?"

In pre-school and Kindergarten the children participate in "Mastery" sessions in the "Magic Circle" which are specifically designed, by giving them deserved positive feedback, to enhance their feelings about their own ability to manipulate their environment, thus building their self-esteem.

Methods in Human Development are the materials teachers use as guides in their daily application of the program. These materials are to be followed as closely as each teacher feels the need. The above sample "Magic Circle" topics are from Part II, the manuals containing activity cues, described next under "The Materials" in this information leaflet.

The training of teachers in the Human Development method is also described herein under the title The Institute .

THE MATERIALS

The HDP materials include a theory manual, lesson guides for each grade level describing 180 daily activities, and rating scales. The theory manual is a concise statement of the learning theories supporting the theoretical foundations of the program. Written for professional educators, the manual draws on the work of noted authors in the areas of psychology and education. The lesson guides are written in the same style and format used in school district curriculum guides for teachers. Objectives, procedures, materials needed, and problem areas are discussed succinctly. The rating scales were designed for teachers to subjectively assess individual student progress in eleven areas: 1) awareness of self, 2) considerateness, 3) eagerness, 4) effectiveness, 5) flexibility, 6) interpersonal comprehension, 7) self-confidence, 8) sensitivity to others, 9) spontaneity, 10) stability, and 11) tolerance. The rating scales guide the teacher in making subjective evaluations of student progress in the affective domain.

The Future

The Human Development Program materials have been completed through the third grade. Because each sequential level is researched thoroughly in successive grades, materials for the fourth, fifth, and sixth grades will not be ready until 1971.

HUMAN DEVELOPMENT PROGRAM

Levels, Group Arrangements, Strategies, and Objectives

Level	Grade	Age	Groupings	Strategies	Objectives
I	Pre-School	4	Single Circle 8 - 14	Encouragement to talk-listen-succeed	Improve ability to sit still, listen and express; develop self-confidence and understanding of interpersonal interaction. Tolerance for individual differences.
II	Kg.	5	Single Circle 8 - 14	Talk-listen-succeed Deal with negative as well as positive aspects.	Develop self-control and self-confidence. Increase understanding of social interaction, individual differences, tolerance. Increase verbal expression and listening skills.
III	First	6	First One circle 8-14; then add self-controlled outer ring till whole class is in two rings.	Discuss ambivalente in feelings thoughts, behaving; effective and ineffective behavior; reality and fantasy. Social variables of inclusion - exclusion - warmth - coldness, decision making. Begin leadership experiences.	Effective self-control, ability to comfortably experience ambivalence, improve reality testing, self-confidence, effective meeting of needs, increase responsibility, tolerance, empathy, skill in making helpful suggestions. Sharing in decision making and recognition of leadership abilities.
IV	Second	7	Whole class in concentric rings. Teacher and child leaders alternate.	Teacher leads one-third of new sessions. Child leaders are guided by teachers in remainder. Continued presentation of awareness, coping, social interaction. Character development is fastened by challenge, committment, and confrontation of peers.	Effective self-control, articulation of wide range of experiences in positive and negative feelings, thoughts, behavior. Self-confidence, positive self-concepts, personal pride, esteem. Distinguish between reality and fantasy. Motivation to be responsible, productive, kind. Share in decision making. Leadership as service, not exploitation. Ability to make helpful suggestions to guide leaders to better functioning.
V	Third	8	Whole class in concentric circles. Teachers and child leaders alternate.	Further challenge to self-sufficiency, integration, honesty. Emphasize awareness, responsibility, keeping committments. Challenge to overtly recognize differences between and interest across the sexes.	Self-control as a matter of personal pride. Verbal facility, skillful and tolerant listening. Ability to tolerate ambivalent feelings in self and others with skill in detecting discrepancies between verbalizations and performance. Wise decision making and responsible, constructive leadership. Courage in taking the initiative to build good social relationships.

A book directed toward parents to compliment the HDP operating in the school will be available in mid-1970. The book for parents will include specific activities for children which the parents facilitate. The assumption underlying the total school-home approach is that effective communication supporting responsible behavior must be practiced in both home and school to achieve maximum results.

THE INSTITUTE

The Human Development Training Institute was established to enhance communication and humanistic understanding among all human beings. The intent is to deal with the human dilemma of trying to understand what other people are thinking or feeling while at the same time, communicating our own thoughts and feelings.

Although HDTI recognizes the fundamental need to help all people to better communicate with each other, its central theme is improving the communication process between educator and child and children among themselves. It does this by providing a 24-60 hour teacher training institute to help teachers, themselves, be more open and receptive to their own feelings and thoughts, and to the feelings and thoughts of children. The institutes parallel the Human Development Program teachers will be using with children in their classroom. Although the teacher training institutes may be altered to meet the specific requirements of each district, they consist of the following set of experiences.

1. Teachers are exposed, on a small group basis, to a series of experiences aimed at helping them become aware of their feelings, thoughts, and behavior.

2. Along with these experiences, the teacher is given knowledge of what she is experiencing and of the skills it takes to help others develop an awareness of their feelings. This is accomplished through feedback sessions after small group

communications experiences and through a minimum of well-planned lectures.

3. Finally, demonstrations by the instructors with representative children from the participant schools are held, both to model techniques and help teachers appreciate the legitimacy of such communicative experiences with children.

This triad of experiences are repeated in all three areas of the Human Development Program theoretical foundation; awareness, mastery (self-confidence), and social interaction.

Similar but slightly longer institutes are held with counseling, supervision, and administrative personnel who provide support and follow-through for the teachers as they implement the Human Development approach with children.

The institutes are conducted by HDTI consultants who are psychologists in private practice or on school staffs, school counselors, other public school personnel, or college professors. Each consultant has been thoroughly schooled in the program and theory and is experienced as a group facilitator/educator. Eventhough the first institute held in a school district may utilize all "outside" consultants, subsequent institutes may be conducted by "in-home" trained consultants with a minimum of "outside" assistance.

Institute details. The following information is given describing the institutes:

1) Most institutes are held in three or four successive days but many are held on successive weekends. (See samples attached)

2) One day in-service programs should be scheduled during the school year following the initial institute if the program is to be effective.

3) College credit in some cases may be arranged for institute participants only at extra charge.

4. The scale below describes size/cost for HDP introductory workshops and full institutes:

	COST PER PARTICIPANT					
	Introductory Workshops			Full Institutes		
Participants	(*)	1 Day	2 Days	3 Days	4 Days	5 Days
1-50	(3)	$35	$48	$60	$70	$78
51-75	(3)	$34	$47	$58	$68	$76
76-100	(4)	$33	$46	$56	$66	$74
101-125	(5)	$32	$45	$54	$64	$72
126-150	(6)	$31	$44	$52	$62	$70
150-200	(7-9)	$30	$43	$50	$60	$68
over 200		$29	$40	$40	$50	$60

* Number of consultants participating in program.

Total cost/participant includes consultant fees, travel, etc. Plus a theory manual, rating scales, and one level of lesson guides for each participant. Deduct $15 each if HDP materials are not needed. One day in-service programs cost $150/day for each "outside" consultant plus travel and expenses.

All institutes and workshops are designed to meet the needs of the school district, the physical setting, number of participants, and availability of children for demonstrations. School districts wishing to initiate institutes should contact HDTI for individualized proposals. The consultants may change the format of the institutes to achieve maximum results.

OTHER SERVICES

The Human Development Training Institute offers training programs for teacher aides (paraprofessionals), teachers in bilingual-bicultural programs, migrant education, and pre-school education. Other services which may be contracted through HDTI include curriculum development, school/community research projects, pupil assessment, and program development/contract federal proposal writing. HDTI also has developed communication models for upgrading interpersonal relationships among adults and industrial/educational organizatio

SAMPLE

20-24 Hour Institute
Split Sessions - Two Weekends
50 Participants

Friday

6:30 - 7:30 p.m.	Introduction
7:30 - 8:30	Micro lab (inner-outer groups)
8:30 - 9:30	Overview of HDP materials

Divide into Four Equal Groups

Saturday	Groups 1&2	Groups 3&4
8:00 - 9:00 a.m.	Awareness Presentation	
9:00 - 10:00	Awareness (group interaction)	Awareness Pres.
10:00 - 10:30	Demonstration with children	
10:30 - 11:00	Discussion	
11:00 - 12:00	Mastery Presentation	Awareness (group Interaction)
1:00 - 2:00	Mastery (group interaction)	Mastery Pres.
2:00 - 3:00	Social Interaction Pres.	Mastery (group Interaction)
3:00 - 4:00	Social Interaction (groups)	Social Interaction Presentation
4:00 - 5:00	(1/2 hour program implementation)	Social Interaction (groups)
5:00 - 5:30		Program Implementation

Friday

6:30 - 7:30 p.m.	Review of Program/Implementation
7:30 - 8:30	Interpersonal Communications Presentation
8:30 - 9:30	Micro labs

Saturday	Groups 1&2	Groups 3&4
8:00 - 9:00 a.m.		Negative Awareness Presentation
9:00 - 10:00	Neg. Awareness Presentation	Awareness Groups
10:00 - 10:30	Demonstration with children	
	Discussion	
11:00 - 12:00	Awareness groups	Negative Social Interaction Pres.
1:00 - 2:00	Neg. Social Interaction Pres.	Neg. Social Interaction groups
2:00 - 3:00	Neg. Social Interaction groups	Program Implementation
3:00 - 4:00	Rating Scales	
4:00 - 5:00	Program Implementation	

3 Day Program
40-52 Participants
1 Professor, 2 Consultants

Note: The number of groups may be increased by multiples of twelve participants with one additional consultant for each two groups.

FIRST DAY

8:30 - 9:00 Registration (1)*
9:00 - 10:00 HDP Introduction (1)
10:30 - 11:00 Demonstration with students (1)
11:00 - 11:45 Discussion (1)

(Divide participants into I-II-III-IV Groups)

	Groups I and II	Groups III and IV
11:45 - 12:30	Inner-Outer groups (2-3)	Lunch
12:30 - 1:15	Lunch	Inner-Outer Groups (2-3)
1:30 - 2:30	Awareness presentation (1)	Materials overview (2-3)
2:30 - 3:30	Awareness groups (2-3)	Awareness presentation (1)
3:30 - 4:30	Materials overview (1)	Awareness groups (2-3)
4:30 - 5:00	Total Group: SUMMARY (1)	
7:00 - 9:00 Eve.	Free	Group Interaction (2-3)

SECOND DAY

8:30 - 9:30	Mastery Presentation (1)	
9:30 - 10:30	Mastery Groups (2-3)	Mastery Presentation (1)
10:30 - 11:30	Group discussion (1)	Mastery Groups (2-3)
11:30 - 12:30	Lunch	Group Discussion (1)
12:30 - 1:30	Social Interaction Pres. (1)	Lunch
1:30 - 2:30	Social Interaction Groups (2-3)	Social Interaction Pres.(1)
2:30 - 3:30	Discussion (1)	Social Interaction Groups (2-3)
3:30 - 4:30		Discussion
7:00 - 9:00 Eve.	Group interaction (2-3)	Free

THIRD DAY

8:00 - 9:30	Program Implementation (1)	
9:30 - 10:00	Student demonstration (1)	
10:00 - 11:30	Discussion (1)	
11:30 - 1:00	Lunch	
1:00 - 2:00	Rating Scales (1)	
2:00 - 3:00	Awareness groups**	Social Interaction Group**
3:00 - 4:00	Social Interaction groups**	Awareness groups**
4:00 - 5:00	Summary wrap-up (1)	

* (1) large meeting room
(2-3) small group meeting rooms
** Led by participants in rooms 1-2-3

THE STAFF

Dr. Harold Bessell is a clincical psychologist/gestalt therapist in private practice in La Jolla, California. President of HDTI, Dr. Bessell has had many years experience as a practicing psychologist, university professor, lecturer, and author.

Dr. Uvaldo Palomares, Vice President of HDTI, has had many years as a public school teacher and more recently a professor in a college of teacher education. A licensed clinical psychologist, Dr. Palomares has authored and lectured on topics including migrant education, tests and measurements, and bicultural/bilingual education problems. Dr. Palomares is on numerous national committees and is a consultant for the U.S.O.E., U.S. Office of Civil Rights, and H.U.D.

Dr. J. K. Southard, Executive Director of HDTI has had experience as a public school teacher, principal, school district director of research and program development and college professor. Dr. Southard specializes in writing federal project proposals, migrant education, school district program development and evaluation, and public school finance.

The Consultants include college professors, public school pupil personnel and guidance services personnel, and psychologists in private practice. All consultants have a minimum of a masters degree. The consultants have participated in HDP institutes and gone through a training program. All are presently employed by educational agencies or in private practice throughout the United States.

ORDER FORM

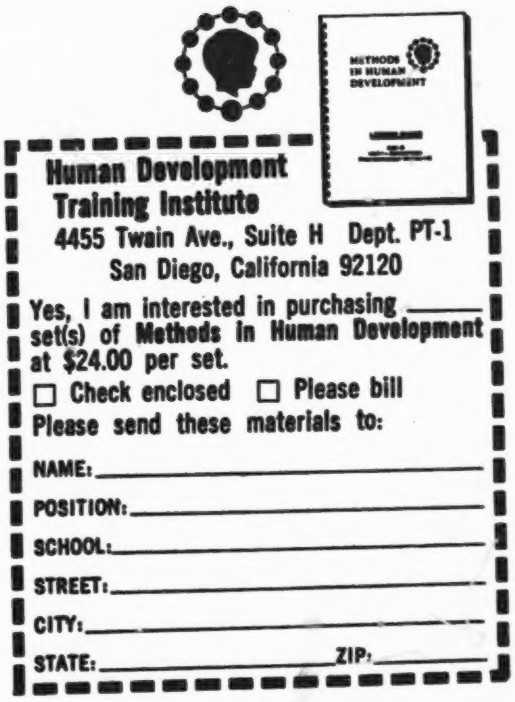
Human Development Program

Item	Cost
Level I: The Pre-School Program	$15.00
Level II: The Kindergarten Program (Suggested for initial program in Elementary Schools K - 4)	$15.00
Level III: (Available in January, 1970)	$15.00
Levels IV and V: (In one book, available in January, 1970)	$15.00
Levels VI, VII, VIII: (Available in in 1971)	
Theory Manual	$10.00
The Rating Scales	$ 4.00
Individual student rating sheets: 50 Pkg.	1.00
Set #1: Theory Manual, Level I, Rating Scales	$24.00
Set #2: Theory Manual, Level II, Rating Scales	$24.00
Set #3: Theory Manual, Level III, Rating Scales	$24.00
Set #4: Theory Manual, Levels IV & V, Rating Scales	$24.00
Set A: Theory Manual, Levels I-II-III-IV-V, Rating Scales	$64.00
Set B: Theory Manual, Levels I and II, Rating Scales	$38.00
Set C: Theory Manual, Levels II and III, Rating Scales	$38.00
Set D: Theory Manual, Levels II-III-IV-V, Rating Scales	$52.00

5% discount for orders over 10
10% discount for 50 or more
Special rates for larger orders

Address orders or inquiries to:

Dr. J. K. Southard
Human Development Training Institute
4455 Twain Avenue - Suite H
San Diego, California 92120
(714) 283-7063


METHODS IN HUMAN DEVELOPMENT

Human Development Training Institute
4455 Twain Ave., Suite H Dept. PT-1
San Diego, California 92120

Yes, I am interested in purchasing ______ set(s) of **Methods in Human Development** at $24.00 per set.

☐ Check enclosed ☐ Please bill

Please send these materials to:

NAME: ______
POSITION: ______
SCHOOL: ______
STREET: ______
CITY: ______
STATE: ______ ZIP: ______

THE YOUNG VISUALLY IMPAIRED CHILD

(With Particular Reference to the Age - Range 3 to 6)

Carol Halliday
Coordinator, Day Care Comprehensive Care Center
Lexington, Kentucky

When we think of the young visually impaired child between the ages of 3 and 6, we are very much on the right course if we picture first a child - then a child, one characteristic of whom is his youngness, another his visual problem. As we know well by now, however, it's not the given age of a youngster which defines his functioning level, his abilities, his knowledges. Rather, these are a composite of his inherent traits interacted with his environment in all its ramifications. When we specify an age range, then of 3 to 6, we can assume that certain vital experiences have gone before so that a child is doing those things which we know that many youngsters within this span can do - or we can grant that such an assumption is far too risky. If we choose the latter course, whether as teacher or as parent, we open ourselves to a truer awareness of the individual youngster with whom we're concerned. We turn ourselves into observers, creators, and enablers of a "responsive environment" - attuned to specific functionings, needs, attitudes, other characteristics, as they are expressed, experienced and interacted with. This is true, whether we refer to visually impaired children or to any child.

In order to work effectively in this manner, we must understand - as best we can - the sequential growth and development of children and the manners in which they learn. Texts in child development spell out these sequences regarding children, generally (Gesell, 1940; Illingworth, 1966). Our own observations, if we have been much with youngsters, will have bolstered our understandings of that which exists and our expectations for the future. We will dwell, then, not on the age as of key importance in understanding and teaching visually impaired children, but on saliencies regarding growth, learning, and development.

That sequences can be disrupted, however - that they do not simply unfold regardless of a given child's circumstances and make-up - is increasingly apparent. Expanding efforts with children called "culturally deprived" (Frost, 1968) often reveal certain lacks with regard to language, visual and auditory discrimination, creative thinking, decision-making, problem solving, understanding and use of one's body, self-concept, social "savoir faire," responsibility, structuring and ordering, etc., which point toward the absence or inappropriateness of experiences relevant to these areas. The results can be devastating. - We hear from J. McV. Hunt (1961) and others that there is a match which must occur, for best results, between what is learned and the readiness for that learning. If this match is, indeed, askew, there may be little learning resultant, in terms of that which otherwise would have been possible had timing been correct. - We are hearing more and more concerning the damage which poor nutrition spreads throughout the minds and bodies of children, whose formativeness makes them especially vulnerable. - We know, as well, of the devastation which too little or too much concern, affection, direction, interaction with can have on youngsters.

We realize, then that it is possible to cause children to not learn, to not develop properly - sequentially, even when they are possessors of what seem to be sound bodies and minds. This can be true at infancy, or at later ages. This is possible, too, when youngsters have such characteristics in one or another way beyond the usual - i.e., a visual impairment; that they may "not learn" - may "not develop properly, sequentially," is as true as it is of those children culturally deprived. Experiential limitations can occur in the finest of homes or of programs, if the visual impairment is allowed to throw perspective sufficiently out of line. Their effects are geometrically compounding, if permitted to exist unchecked and untreated. As teachers and/or parents, we need to be aware of the potential for, and tendency toward, "normal" growth and development of all children - even though a youngster may be visually impaired, or even severely multiple-handicapped (Moor, 1968). We then must become ever more cognizant of the possible trouble spots which may arise if certain basic principles are not recognized and acted upon.

Perhaps it will be most useful at this point to think in terms of those aspects of children's development and learning, generally, which are recognized to be of major import. These would seem, in succinct terms, to be: physical well-being; movement; gross muscle use; sensory reception and involvement; self-care and intra-family/intra-group responsibility; fine muscle use; the personal/social; language;attitudinal; the self-concept. Whether as parents or as teachers we must be concerned with children in terms of all these facets. If one is forgotten or neglected, the effects are pervasive within the framework of the "whole child." One aspect gone awry throws the entire human system off base. We call the results synergistic, just as we speak ever more knowledgeably about the synergistic ramifications which more than one major handicap imposes on a youngster.

A closer look now at each of these aforementioned facets of development and learning is appropriate - with particular attention given in terms of the effect which a visual impairment may have in each of these areas, thus on the whole child. At this point, a definition of "visual impairment" would seem fitting so that our concern will be mutually understood. We are speaking of children who: (1) have no vision at all; (2) have little vision and learn most easily and naturally by oher than visual means; (3) are greatly limited in one or another way as to effective visual functioning (i.e., regarding distance, scope, lighting), even after ophthalmological correction, to the point that they must be taught to make good use of their vision and/or have their visual learning strongly enhanced or replaced by that of the other sensory mechanisms. Let us state, too, our awareness that frequently children born with one major impairment, in this day of growing medical know-how, have more than one. We are particularly directed, at present, to the child whose visual problem is not compounded by others. Many of the points made within this framework would - if elaborated upon - apply to multiple-handicapped youngsters, however.

To give us a further base of common useful knowledge, let's skim the surface of general learning principles relating to children (Ashton-Warner, 1963; Bruner, 1966). We can then integrate them with the ensuing comments regarding child development and learning as pertinent to visually impaired youngsters. In general, children thrive best when they progress from: activities involving more body involvement to those involving less; large muscle to small muscle use; the familiar to the unfamiliar; simple to harder tasks; immediate to more remote concerns; activities calling for a short attention span to those requiring longer; one concern to several concerns; thinking of self to thinking of others; things "lived" to things "thought"; using words as labels to using words as organizers and enablers of thought; "doing" to "sensing" to "symbolizing"; analysis to synthesis; "field dependence" (reliance on the immediate environment) to "field independence" (ability to rise above this immediacy);

identifying to comparing; taking apart to putting together; outlines to details; recognition of differences to recognition of likenesses; recognizing to reproducing; recognizing opposites to determining varying kinds of relationships; random ordering to dimension ordering to several-dimension ordering; categorizing to establishing hierarchies; perceiving objects through the senses, to noting their use, to naming them and their uses. - Keeping the aforementioned generalities in mind, think then of the young child who is visually impaired who falls by virtue of age into the older preschool category. Whether this youngster is at home or in some kind of organized program, the same sequential development, the same learning principles apply.

Physical well-being was mentioned first in our previous "facets of the whole" listing. This was purposefully done to stress the importance of doing all possible, as a prime way of work, in terms of meeting the child's general health needs (i.e., regarding adequate diet, physical examination, corrective surgery). Only when appropriate remedial and preventive actions have been taken can the youngster begin at his highest "base" level. For the visually impaired child, this is particularly essential. Our growing sophistication in such matters will allow us to temper flat medical knowledge with educational know-how, thus permitting (for example) our understanding that a child (particularly a little one) called "legally blind" may indeed have quite a bit of usable vision.

With regard to movement, of vitalness to all children (Cratty, 1967), let us herewith acknowledge its cruciality for those who are visually impaired (Cratty & Sams, 1968). With no vision or with little vision as motivator, these youngsters may very well move less at early stages. Unused to the pleasurable feels of different way of moving, they may lapse into relative passivity. Limited movement can result in a curtailed world view, can weaken one muscularly, can restrict one's kinesthetic knowledge of one's environment, can narrow understandings based on direct experience, can functionally retard one in many life-areas, can stress one's differentness from other children. Our challenge is to encourage movement in every way at our command.

Gross muscle use calls for a variety of experiences, activities, materials, equipment. It involves large toys with which to play - on which to ride, climb, etc. The essentialness of learning to use large muscles well before refined use of smaller muscles can occur spells out the need for activities involving rolling, sliding, lifting, placing, carrying, lowering, punching, pushing, pulling; for large ball play; for the use of clay, sand, mud, paints, water, large chalk, large crayons. Limited vision must not exclude a child from any of the above - rather, it calls for creative showing as to how, where, when, whether at home or in a teacher-guided program.

Sensory reception and involvement refers to the imperativeness of each child's using his sensory mechanisms to the fullest. We are called upon to review general learning principles, in order to realize how perceptual abilities develop. We are challenged to assess, both medically and through behavioral observations, how well those sensory mechanisms in question *are* functioning. It is now known, for example, that the same visual acuity measure in two or more children tells not at all the same story regarding how these youngsters use their vision. We know, too, that visual use can generally be made more efficient if it is developmentally taught (Barraga, 1963). Sharpening a child's strengths while strengthening his weaknesses is the most effective combination typifying good teaching. - Ridding the youngster's working environment of the "ambient noises" which can dull perception of one or another kind (i.e., tactual distraction through *too much at one time* of interest to the fingertips; the constantly played radio) is another important consideration.

Self-care and intra/family, intra-group responsibility present areas of vital concern to the visually impaired child (Murray). Abilities in both domains are most necessary for one's self-respect, for the development of increasing independence and for recognition by one's peers of one's competence and worth. Learnings regarding self-care skills call for thoughtful and sensitive adult actions, for patient showing and allowing for time to do and time to practice. In the family/peer responsibility-sharing area, it's essential that the visually impaired child begin early to help carry his share.

Starting with learning to find - then to put away - his toys, helping pull off a coat, drying a dish, locating a dropped object, then moving in a developmental way into tasks of more complexity are of supreme importance to all children. The visually impaired child must be taught these things, more explicitly than many.

Fine muscle use can develop from the base of good large muscle use, but needs specific opportunities for development - even teachings- in progressively-refined ways. Activities involving simple tactual discrimination on a single relatively gross dimension, learning to pound, to turn a knob, to use soap, to put on hand lotion, to take simple things apart - then put them together, to move a large crayon within a large template, all come before the more elaborate tasks of using scissors around a heavy pattern, of tying shoes, of fastening small shirt buttons, etc. Individual attention, specific instruction will be necessary - much more so than for the youngster whose casual distance glance gives him much useful information on which to build. There are many educational materials available for these purposes, intended for children generally. Often these can be used, meaningfully, as they are - or can be modified in one or several ways to improve their relevancy. The American Printing House for the Blind is in the process of making available some early childhood materials whose qualities are designed to be especially helpful to children with visual impairments. (They will prove pertinent, as well, to children generally, however.)

The personal/social facet of the child's being is that which, along with language, accounts for much of his humanness. It is intertwined with every part of his being. The ways in which the youngster develops in these lines depend heavily on his meaningful experiences with family and peers from earliest childhood. Curtailed vision can keep one from awarenesses that enable one to relate comfortably and alertly with others. It can - almost from life's beginning - cause lessened interactions between child and adult caregiver (Fraiberg, et al, 1969). Certain social graces, significant to persons' enjoyment of each other, are not picked up casually by the visually impaired child and must be taught. Attention to one's appearance, relatively easily given visually, must be attained through diligent application of effort. Crucial to the whole concern is the affording of numerous chances to be with peers, as well as with adults. The sharing, through early childhood education programs, with peers of varying abilities and characteristics is basic to the growing understanding of self and others. With visually impaired children this doesn't just happen - or happens less frequently than is so with many children.

Language, intelligence and learning are being tied together ever more firmly by those who are concerned with early learning. Ways of developing language are being pursued, within the family and early childhood education settings (Cazden, 1968; Levenstein, 1969). Debate continues, regarding visually impaired children, concerning the necessity of tying words to firsthand experiences as contrasted to their use for communication value (Dokecki, 1966; Harley, 1963). It is obvious, however, that the more direct experiences children have which can give them word meanings which in turn can enable increased inter-personal contact, understanding and relating, the more knowledgeably social will be their development. Our responsibility to provide and interpret these is a prime one, whether at home or in other "program" settings.

The attitudinal domain is interwoven throughout every aspect of the whole child. It is essential that the visually impaired youngster have tangible evidence of the reliability of his world - both regarding persons as well as things - so that the trust (spoken of by Erikson) can be built within him which is essential to his well-functioning (Maier, 1965). Limited vision may indeed curtail curiosity, may allow one - from superficial viewing - less choice regarding leisure (free time) activity, and may open the way to certain repetitive actions (mannerisms) which stimulate and please if other activities are minimal. Such negative effects may be prohibited, however, and highly positive ones attained, through the purposeful plans and actions of aware adults. Respect for others, stemming from a growing respect for self, and thoughtfulness can evolve in the visually impaired youngster as they should in all children. Adults at hand must seize the moment and help teach these kinds of understandings as they would other kinds. - Perhaps special stress should be placed, however, on learning to make decisions, to ask for needed help (in a way that maintains one's good feeling about one's self), to solve problems of increasing complexity in a simple, basic way. The visually impaired child, usually more than his sighted peers, needs to be taught about causes-effects, order in his universe, the structures of and relationships between and among the diverse parts of his world. - A final point made in this vast and vital area has to do with the influences which the varied expressions of others have on one's functioning and on one's feeling about one's self. We read of the effect of teacher expectancy on children's performance (Rosenthal and Jacobson, 1968) and have but a glimpse of the magnitude. The visually impaired child who hears himself spoken of in pitying or awed or deprecating manner will be influenced accordingly. The task of the caring adults around him is not only to nurture in him a positive, realistic feeling of worth. We must also educate, constantly, those within his acquaintance - circle to his basic childness, his humanness, his uniquenesses, his worth.

Relfect for only a moment on that which has gone before. Note that all the points raised, the comments made could be stated - in regard to their core meaning - concerning children, in general. Whether youngsters have no obvious handicaps or have severe and multiple ones, the principles of sequential development and growth and of developmental learning must be known and employed. A mother of a 4-year old child severely visually and auditorially impaired said recently, when asked how her child functioned as well as he did: "I just look at him each day and watch what he does. I think - what can he learn tomorrow that's a little more than he knows today? Then I try to teach him!" Thus children learn - all children - some faster, some slower, some through one sensory means, some through another. The principles are there for us all to use.

In view of that which we know and in which we believe, our challenges then - whether we think of the young visually impaired child from the vantage point of parent or of teacher - are:

1. teach to his childness - while as fully as possible considering his unique needs regarding learning and living;
2. be developmental - in experiences provided, as well as in the kinds of teaching done;
3. consider the visually impaired youngster as teacher himself - his ways of learning, with little or no visual use, can open the world further to others in its other-than-visual characteristics;
4. push for including children with differences in the various situations in which we find ourselves; in education settings, the early childhood years are particularly suited to this since formal academics - often calling for different technological learning means - are not yet involved;

5. make sure sufficient individual attention can be given the visually impaired child so that real learning can occur. This may mean in an education - program involving volunteers, parents, high school students, etc. - at home, it may call for more careful planning of time - use, or for other creative solutions;
6. beware of labels which categorize children neatly and refuse to acknowledge individual differences; help interpret to all with whom such is relevant the commonalities among children, generally - the special needs which visual impairments are likely to cause - the strengths and weaknesses of a given youngster, etc.
7. urge local interest and action concerning all the locale's children - urge state and federal interest and action regarding all children; push for the providing of appropriate programs for all preschoolers - especially for children with handicaps, helps offered in homes during earliest infancy are imperative;
8. work together - as parents and teachers - in concerted effort regarding those children with whom we are concerned.

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Visually Handicapped Children, Birth to Three Years

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All of us present are interested in visually handicapped children and feel friendship for them. Our work, in Selma Fraiberg's educational program for blind infants in Ann Arbor, has concentrated on infants blind from birth. The children cannot call on any previous visual experience. There are a fortunate few who have light perception. Others may gain vision as a new sense, for instance, after cataract operations, which are being done earlier in the first year when possible. For those who do have light perception, or even color perception without form, the world out there becomes real in another way and they have an advantage which shows up in differentiation of self and others, and dramatically shows itself in such activities as doll play.

I can feel the tugging of Joan's small hand. Joan was born with congenital glaucoma. At two years, she will take my hand and lead me where she wants to go. One day she led me into her mother's room to look at the large mirror. In it she can see reflected light and color and movement but no form. She likes to sit or stand in front of the mirror and wanted to share the game with me. Sometimes she will play with her shadow on the wall.

When she came to the clinic to see the eye doctor she could be quieted by being given a hand mirror. She holds it close to her face. The doctor quickly made an adaptation of looking over her shoulder and when he flashed his small light she saw it in the mirror, smiled and, understanding the reality causing the reflection, she turned to look at the light itself. The doctor's efforts now will be at saving what light perception she has. It is a wise doctor who adapts his exam to keep from startling a blind child. The pace can be slowed down.

Our work is aimed at developing the child's own abilities and autonomy in the real world. It is started as young as possible. The basic foundation is the relationship between infant and mother. This may be strained at first if a premature baby is not used to handling and if the mother is naturally depressed by having a blind child. She may be normal in every other way. For the purpose of this discussion we will focus on the one handicap rather than multiple disabilities.

The time for referral and support, guidance and demonstration for the parents of a blind infant is at the time the diagnosis is made. In other words, the earliest possible moment. If congenital glaucoma or some other conditions can be diagnosed at the time of birth that is the time to support the parents, for even at a time of shock and despair there is much that can be done for which the parents are very grateful. Occasionally, the blindness is not recognized till four months or even later. If a mother in that situation becomes severely depressed this requires skillful handling and referral for treatment.

Parents may ask "How will the baby know me?" The intuitive mother will cuddle and hold her baby in the same way that she would a sighted child. For the totally blind child this is even more important. He will learn to know his mother by touch, voice and the kinesthetic sensations of handling during daily activities. But, as Selma Fraiberg says, "If there is tactile auditory insufficiency in the first months, it will prevent the blind baby from making the vital attachments to his mother and to the human world." Unfortunately we sometimes see children for the first time when they are already over a year in age. Occasionally there will be a difficult social situation in which a child has not received his mother's love. One little boy we call Jerry was neglected by his mother. He was then cared for by an aunt who took good care of him. But his mother regained custody and the series of changes has been too much for him and he appears to be disturbed. Even when a mother wants to give good care, if she does not have professional help or guidance during the first year time is lost that is very hard to make up. If we could only give one year of service and had to choose between the first or third year we would have no hesitation in choosing the first.

As reported in the recent article in the Journal of Special Education (1) "No educational strategies can succeed if the baby has not found meaning in his world through affectional ties to his parents. No toy will have value if the human figures in the baby's environment are not valued. No device will give meaning to sound if the human voice has not united sound with the totality of tactile intimacy, comfort and pleasure that can only be provided by a human partner." Parents will be rewarded by the infant's smiling to their voices and touch, so the language of smiling is not absent; it is learned through other cues. Of all the things that we have done to aid the early development of blind babies we place greatest value on our work in promoting the love bonds between the baby and his parents. Given this basic premise the blind infant can develop satisfactorily. The blindness need not handicap him in other senses. The other perceptions are not more sensitive to start with, hearing and touch for instance, but because they are used without sight, there is more attention to sound and the apparent sensitivity develops. This will be if there is not confusion of other noises and if the child can cause sound in musical toys and rattles.

The other basic necessity for the infant is to be allowed to act in a voluntary way upon his own world. Even feeding is not a passive experience. Anyone who has seen an infant rooting for the breast knows nature did not intend feeding to be a passive experience. Or we can see an infant reaching actively for the bottle and soon placing both hands on the bottle, or one on the person holding him in her arms. If a mother holds the baby's hand still during feeding, even lovingly, she is preventing him from the first voluntary gestures. Love can be expressed in holding, but not in preventing hand movement. When he can hold the bottle himself, still in his mother's arms, he has the satisfaction of participating in the feeding and knowing who is the human provider. This tie is necessary and continues on through finger feeding and to self feeding later. There is rarely any difficulty chewing if solid foods are presented at the time of teething to an infant who has learned to participate. Since feeding is central to the first year much learning takes place around it.

When we look at toys for any age from the first four months on to age three years, there is a point of view from which to work. Freedom to explore the safe toy is a doorway to creativity that "learning the right way" cannot provide. For the developing infant there is no "right way". There are areas in life where this comes, much later, and always subject to change and adaptation. A previous head of World Health Organization has said that today a child needs ability to adapt to change to a degree never known before. Our world is changing so rapidly. For the blind child a wise balance exists between finding things in a familiar place and finding new opportunities. The toy with an attractive sound is indispensible to the blind infant, but only if he can act upon it. As an early example, there is the cradle gym which makes a sound when a ring is pulled. It is called an activator. The action blocks add much opportunity to investigate and cause a sound for the older child. Background noises of television and radio may please an infant but he cannot act upon them until he is motile. Creeping will come when the infant is motivated to reach toward a familiar sounding object that he has previously handled and enjoyed, and when he can identify approximately in space where the sound is coming from. For a long time the sound of a bell does not connote the object he just held. But by constant experience with that toy he will learn, at about 10 months, that the sound means that toy. It takes many weeks of learning to reach on sound cue and it must of course be built up on small successes, not countless frustrations. At the appropriate time the sound will cause him to reach for what we have not yet given him.

The baby who has all his wants supplied before he even knows he wants something does not learn his own ability to cause events. Even an autistic child may be said to "come to life" when he takes action on his own behalf. His attempts to cause mother to come, or to feed him, have meaning for an infant in a learning sense if the interval is very short between cry and the appearance of his mother or the bottle. If he has not had to ask for it at all he does not know he can cause anything. Food reaches his mouth by magic, not by his efforts. The sounding toy which he can locate provides him with the sense of object constancy which, once learned, can be tested in various ways by covers or barriers which may become more complicated.

We all have in mind many toys that we have used with blind children. The person who offers the toys to an infant is as important as the toy. The skill lies in interesting the mother to continue the interaction which may be demonstrated. This may mean giving much support to a mother who is not confident and whose vision of the future is clouded. There must also be opportunity for the baby to play when his mother is busy. Crib toys are needed, and the sounding cradle gym, which does not go away but is there when the baby raises his arms and hands. It gives him, not only much fun, but more information about his own actions as he learns to cause the sound. As soon as he can sit supported, we use a chair surrounded on three sides with a table surface, with a small rail that prevents objects from dropping over the edge, gives opportunity for manipulation of objects in a different plane. He reaches at midline and is certain to find toys there, on the table.

The gross motor milestones may come a little later for blind children but they will appear in order, if the child is given the opportunity. There is great pleasure for the blind child in dancing as we saw one girl doing just before her third birthday; it was rhythmical and free to a good nursery record. There is pleasure in singing along with the record too. Gross motor supersedes small manipulations when it has appeared and can be endlessly encouraged, with benefit to later mobility. The child restricted from mobility has fewer outlets for energy and aggression and it may be turned inward.

As an example of this Jackie at 17 months had a severe set back. His mother was called away suddenly when her father died and was away several days. During that time Jackie was in the care of various friends and relatives who helped out in the emergency. When his mother returned she found Jackie had screaming fits which lasted for hours. There was brief consolation when his mother held him. She sought help from Mrs. Fraiberg. From the observers she learned that it looked like helpless rage. She gave the suggestion that when Jackie started shouting his mother should provide him with pots and pans or banging toys and encourage him to pound them with his hands. Within a few days the mother phoned. The banging games had "worked like magic". The shouting had stopped and Jackie had taken to the pounding with an enthusiasm which surprised her. It created a noise but it was one she could tolerate. More than this, it provided adequate discharge of tension. He began to show signs of improvement, shouting was rare, clinging decreased and he was playing actively again. He used his pot banging only when he needed it. Later his mother gave him a toy punching bag he enjoys. He is a child who can fight back if necessary.

Unrealistic expectations of parents may be too high or too low. Both are frustrating. Each child is different. How is the mother, or her teacher to judge? The child will tell us, given the opportunity, in a permissive, tension free atmosphere. How do we know what is the appropriate toy? The burden is on the observer. A child may be rocking, out of boredom or loneliness. The rocking may cease when his attention is captured. It may drop out entirely, as we have seen, when mobility increases the range of the child's world. If the mothers or fathers time with the child is so important, they also are all different. With the intuitive mother a program of what might be called enrichment will enable her to do well. But what about the depressed mother of a handicapped child? Many, perhaps most parents, go through a period of depression when facing the knowledge that their child is blind. If professional help seems indicated, it is well to separate treatment for the adult from the encouragement to enjoy her child which will come as she feels better able to cope. Sometimes the opportunity to express her feelings in a non-judgmental atmosphere may be enough to allow her own strengths to emerge. Of course, the satisfaction of seeing the child's small gains in accomplishment will bring happiness, if it is understood. As long as a mother can care for her child, however, her place is right there with him.

In any case, a child cannot be treated successfully without the participation of his parents or foster parents. We do not place ourselves on opposite sides. Enlist their aid, welcome it and as they help it will help the child. If we can regard the parent as an asset, and as an extension of the program, we can assume that all are working toward the same goal.

In playing with a baby or pre-schooler, we always sit on the floor. This brings us down to their height. Otherwise, their world is made up of legs of people and furniture, whether they can be felt or seen. The blind child appreciates this and will stand beside us, or sit there with a comfortable friendliness. Many so called lap games can be played on the floor while insuring more independence of movement to the blind child who can safely move around. A blind infant when placed prone on a blanket does not raise his head naturally because he does not have the stimulus of vision. If we are on the floor with him, stroking his head or just keeping in touch, he is more easily interested in a musical ball or toy that he can use both hands to play with when his head is raised. The musical ball rolls out of reach, but not far, and he will reach out, and this leads to creeping when he has matured to that point. Some blind children have the motor abilities but not the motivation for creeping.

Language makes its beginning in the first year, with cooing and then babbling in response to mother's voice. If we wait after speaking the baby will respond. He may initiate the conversation. If we speak with the infant in simple terms always naming the activities taking place, he will soon learn by our tone and later recognize the words. Language development follows the same general pattern of a sighted child but a little slower. There is not all the naming of objects that are seen that a sighted child asks for. With a warm relationship and conversation directed to the baby's pace and understanding they will soon imitate and experiment with sounds. If there is a continuous stream of conversation going over his head he will lose interest. All the hand games with nursery rhymes are interesting. One leads to naming eyes, nose, mouth and so on. Patty-cake is a perennial favorite, sung all the way through. Peek a boo can be played with touch.

If there seems a discouraging lack of progress in a child's interest and ability to manipulate toys and rattles there are many possible causes. Of course, we expect the child to be receiving medical care and periodic examinations. However, it is possible, even nowadays, for the child to be on an inadequate diet. The great lack may be protein. And we are not talking only of the economically deprived child. A so-called middle class mother may be stressing fruits and commercially prepared mixtures. The mixed meat and vegetable jars have less meat than we expect. To some extent, the baby, "eating from the table" has an advantage in that at least his family knows what he is eating. An increase in protein may soon produce an increase in body tone and vigor. A mother may be asked to keep a record for two days of what a child actually eats - not just what is offered.

We know two children who were kept too long on strained food. They were low on protein and missed the best time to start chewing - when the teeth come in. There is an institution in Guatemala called Incap where much important research is done on nutrition by Dr. Cravioto and others. The child with severe protein deficiency can be cured by diet. But if the malnutrition occurred too young there is permanent damage that can never be repaired and the child remains at a retarded level. Do we need to mention that a child may also overeat and become obese, which has its dangers.

Some mothers are quick to say a child does not like a certain food and, of course, we all have preferences. A food should never be forced. However, if a new food is re-introduced casually and frequently a child comes to know and like it. This applies to new textures too. We have all seen the expression of a child given a new taste. It is total rejection. They may reject solids, too, if used to smooth consistencies. The child with siblings is in an advantageous situation. If everyone else enjoys a food, he soon will, too. If a baby gags at the first experience of solid food, that may represent rejection. If physically normal, they will learn by experience to enjoy it. We get different reactions to hard teething cookies. Some mothers say they are tasteless. But if a child will bite down hard on a teething ring he will bite on a hard cookie.

Bringing toys to the mouth is natural to all children. For the blind child it may develope usefully. When Jackie age 3 was first given wooden spools on a string he only took them off. The second time, and without any help he learned to thread them on. He held the spool in one hand and the lacing in the other. He lightly touched the spool to his mouth and then accurately inserted the lacing. He threaded several spools in this way. The touch to the lips may be as quick and light as a glance will be from a sighted child, and provides similar information.

And so the mother provides the early learning. If she does not understand this, the infant may remain unstimulated in his crib for most of his day, and he may appear retarded. We stress his learning to know his mother by her holding him for feeding. Some children who are raised where breast feeding is still natural will have an advantage. Singing and lap games create conditions for a dialogue between mother and infant. This achieves the first guarantees of a blind baby's development. They learn to associate pleasure and satisfaction with her person, to unite feeding and physical intimacy. A premature infant, coming home after two months in the hospital, requires tactful, gradual introduction to holding. They may give the appearance that they don't want to be held, due to lack of experience.

If the hands are free to explore, opportunities must be given. A cradle gym across the crib is much enjoyed. When he raises his hands in random gestures, he will contact it. Those incorporating sound are most interesting to him. Any soft or stuffed toy is more interesting if there is a pleasant sound, one that does not require too early a skill in turning it on. It gives comfort too.

As soon as the child can sit supported, he needs experience in sitting. A blind infant of six months can get much learning from finding objects on a flat play table surface.

A playpen is essential. This provides a known space within which the baby can locate his toys, can roll over. At the time he is ready, it gives him a safe place to pull himself to sit and later pull himself to stand and cruise around the edge. He needs some time alone to amuse himself but much of his waking time is spent in company of parents or siblings. A child left alone too much is too inward turning. A balance is required. When he learns to walk the playpen is outgrown.

As a sighted child learns to use his hands he watches them. A blind child needs definite help in bringing the hands to midline. A ring on which both hands can be placed at one time helps. Also, of course, both hands can go to the bottle. The nursery game of patty-cake is helpful. It will lead to mutual fingering and then transferring and exploring shape, texture, moving parts of a variety of objects.

A dinner bell, with a wooden handle that can be chewed safely, has been found a very important tool of learning. Babies enjoy it and it can be used to initiate search on sound. At first, it will have to be touched to his hand. Later, at approximately ten months, he will reach out accurately to its position. This belief that the bell exists and he can reach it himself is a milestone. The baby who is rolling to prone and getting on all fours will creep to this bell when he is physically ready.

A blind toddler will walk around his house and learn his way. Then the playpen is no longer necessary. There is so much pleasure in walking for a toddler that he may temporarily lose interest in fine manipulations. He just wants to walk all the time. There are many large toys they can ride and enjoy while using the whole body. If taken outdoors everyday, a toddler is not afraid of outdoors, and is safely accompanied on small adventures.

Imaginative doll play goes thro various stages. The totally blind child is not interested early in doll play. Two children with light perception showed an interest in dolls around two years. Joan carries a doll happily. She will now brush her doll's hair. Karen, who had a baby sister, calls her doll "Baby" and feeds her and puts her to bed. A totally blind girl, Cathy, did not seem interested. When asked if she wanted to give the doll a bath she stepped in the baby bath herself. There is difficulty in understanding miniatures. When Cathy was given a miniature Christmas tree she said "Feels like brush". Karen has a real dog but when given a small toy dog she felt it all over and put it down, not much interested. When her sighted sister picked up the toy and said "Doggie" Karen looked surprised. It is easier with some furniture, such as a chair, for a totally blind child to learn different sizes including the miniature. Nested cups may help. Joan is interested in shoes, her own, her doll's shoes and sometimes "dresses up" and wears her mothers shoes around the house.

Fear is not normally present if children have been allowed experiences under safe guidance. A blind child is very sensitive to the feelings of those around him. A mother may have to learn security herself in letting him progress. The child who is interested in a world that has been kind to him will seek new experiences.

If I may quote from Witter Bynner.

".......tho he lead them
He follows them
He imposes no weight on them
And they, in turn, because he does not impede them
Yield to him, content:
People do not tire of anyone who is not bent upon comparison."

(1) Fraiberg, Selma: Smith, Marguerite: Adelson, Edna "An Educational Program for Blind Infants" Journal of Special Education, Vol. 3,No. 2, Summer 1969

A Service for Pre-School Visually Handicapped Children and Their Parents in a Metropolitan Area

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A Service for Pre-School Visually Handicapped Children and Their Parents in a Metropolitan Area.

In 1950, when the St. Louis Delta Gamma alumnae sought a project in their field of aid to the visually handicapped, a survey revealed no service for pre-schoolers although the number had increased due to Retrolental Fibroplasia caused by the oxygen given to prematures. Many were retarded in functioning and peculiar in personality and agencies for the blind wanted a school for them. A teacher well grounded in Nursery Education and Family Living was hired and I succeeded her in 1955 with a background in Psychology, Social Work and nursery teaching. Each of us was sent for a course about pre-school blind children and one on diseases of the eye. In visits to nurseries around the country she was impressed by the greater stimulus to activity blind children received from the others in regular ones than in those for blind only. With guidance from the American Foundation for the Blind our free Parent Counseling Service was set up, basedon monthly or oftener home visits in the Greater St. Louis area and office consultations for out of towners, with placement in nurseries for normal or retarded children and a liberal scholarship program.

My half-time assistant, chosen for her warmth and animation, has a degree in Home Economics and has taught in nurseries for normal and retarded children. She goes weekly or oftener to a few who need extra social or intellectual stimulation for special reasons.

Funds are raised by Delta Gammas through the sale of christmas trees and cards and from private contributions.

Although fewer are blind now, most of what we have learned applies to children who are partially seeing and deaf or retarded. To some parents even a relatively mild degree of visual loss is devastating and additional defects are an added blow. On learning that her baby was blind an older mother told me of taking to her bed for a week of vomitting and praying she would die. On hearing that hers was aurally and visually impaired a young mother felt her life was over and wanted to die and a nurse blamed doctors for keeping her blind son alive. Strong disappointment, fear and bitterness, plus guilt and shame for such feelings and because they feel somehow responsible, are universal in even the finest parents of severely handicapped children. We try to elicit expression of these emotions and assure them that they are normal and not immoral, because when they are aired the intensity is usually reduced and they become more open to reassurance and information. They cannot react with love to the child while strong negative feelings are bottled up and they can be explosive.

At least for the first visit I try to come when fathers are there and continue at night or on Saturday every other visit, or monthly if both parents work, and go also to the homes of sitters. The sooner we reach the family after diagnosis, especially if the handicap is severe, the greater chance we have to prevent problems by restoring faith that this child can become an independent and productive person of whomthey can be proud.

Fathers are apt to ask factual questions and I bring information about educational and vocational opportunities and the activities of our State Bureau for the Blind. One thought his son would sit at home until he was old enough to sell pencils and another asked whether he would some day need to live and work in a special place. Mothers may doubt their ability to train him and both are apt to fear he will be unhappy and retarded. Snap shots of our children, often doing things they thought impossible, bring hope and as we look at them I point out their achievements and problems and the kinds of handling we think can produce each. Amusing annecdotes help lift the gloom and accustom parents to talking more freely about the subject.

With a diagram of the eye I often explain conditions they were too upset to grasp or clear up misconceptions, such as that each can give an eye or that surgery can cure him. Until the facts and their responsibility for training him are accepted they will not be motivated to learn how to help him as he is, but this cannot be forced.

Aside from relieving parents' distress all of this is of the utmost importance because, as you know, anything that interferes with a baby's close relationship with his mother precludes normal personality and intellectual development. Blind babies have a pull toward autism, the tendency to live within themselves and respond more to internal than external stimuli, but if parental feelings assert themselves soon and they receive loving care and extra cuddling and talking to most will become loving and outgoing. Easily incurred passivity remains a threat to be combatted through much stimulation, but it must be on increasingly mature levels. Most parents of handicapped children have difficulty in disciplining them and requiring the self-help of which they are capable because they want to make up with mistaken kindness and those who truly cannot accept them hide it from themselves by extreme solicitousness and indulgence. I try to implant the conviction that firm control and demands for increasing independence are not unkind and are acts of love which help the child to be and see himself as lovable and capable, while doing everything for him and making pitying remarks can slow his development and make him see himself as helpless, incapable and less lovable.

Because self doubting parents are ineffective, they must be convinced that they are the ones best qualified to teach him, with our help, because any young child learns best from his parents and he is not so different from others.

Through discussion and literature we help them to anticipate next steps and make suggestions for promoting development and avoiding or overcoming problems. We often bolster their resolve to handle him in desirable ways or to follow advice for overcoming problems long enough for success, in spite or criticism from others.

Pushing too hard, sometimes to reassure themselves or his normality, can produce delayed development and resistance to teaching, but the classic pattern of pseudo-retardation is one of too much restriction, protection and indulgence and too little expectation, stimulation and discipline. If slowness seems unrelated to handling we discuss his rate of growth and advise parents to expect behavior appropriate for his apparent mental level. We may need to interpret the value and limits of evaluation services and explain the difference between brain damage and general retardation. Questions about testing procedures and the concepts of mental age and I-Q are frequent.

Relatives, strangers, teachers and house parents feel free to criticize these parents. Although the child's problems may be related to inadequacies in one or both calling for professional help, this is most difficult to interpret and for them to accept. If they are not ready or are unable to use our advice we should remember that most are trying to do the best they can and criticism may only increase their self doubt and resentment and and cause them to give up. Also, the child must do the growing and we do not know enough about the effects of long illness, repeated surgery, brain damage,inborn tendencies to faulty personality, family problems and the influence of relatives to hold parents solely responsible.

We try to improve the "climate of growth" through suggestions, referral for medical and other services beyond our scope and aid in obtaining public benefits for which they are eligible. We find Public Health Nurses most helpful, especially with severe feeding problems.

Because St. Louis has three centers where aurally impaired children are served we offer less in this area, but we confer with therapists and work together. As a concrete form of help we loan educational toys, storybooks and action type records, materials of the Reading Readiness and Perceptional Motor sort and in some cases equipment such as high chairs, potty chairs and tricycles.

Parents must interest the very young child in our toys because few accept help from an outsider. First he must have learned to love so that he will want to please and he must have achieved the beginnings of independence, because, if he will not hold his bottle or retrieve dropped food he is not apt to use them purposefully and before he walks he is not likely to sit down long enough to be taught. He should have explored freely and examined, manipulated and compared objects and sensations. Many recoil from unfamiliar textures and resist having their hands touched but these aversions can and should be overcome with gentle persistence. Work with toys must not be a substitute for fun and experiences. He needs the same toys other children enjoy and we urge parents to acquaint him with all they do around the home, take him to stores and places of interest and encourage him to ask questions.

Partially seeing children may fear or be confused by what they see but they can learn and their ability to recognize pictured objects and interpret pictures can usually be increased surprisingly. Parents and teachers may need to be shown how close they must get to see things clearly.

After age two agemates are invaluable and worth seeking in a park if none live close. All children do not need nurseries but most could benefit from a safe place for active play with friends who do not run away and the opportunity to adjust to another woman and to routines. We try to find a school nearby, often aided by our State Licensing Workers, and "sell" the child if necessary. We may accompany him for a short time until he and the teachers feel comfortable. We observe him and counsel with the staff periodically and report to parents his progress or shortcomings that can be overcome. We have placed over 100 children in about 50 nurseries.

With parents' consent, I write case histories for agencies and as Kindergarten approaches I help parents weigh educational programs and send a summary to the school they choose. During his first year I serve as liason between school and home, especially for parents who can seldom visit,to report on visits to his class and share their pleasure in all that he is learning. Sometimes I can make suggestions for overcoming minor problems and bolster their faith in measures the staff is employing or clear up misunderstandings. As he settles in school our contact tapers off or ends but they are free to call. We may continue to serve retarded children for several years until they are in school. In some cases the need for help in accepting and applying for institutionalization arises and this too can be a real service when necessary.

Jessie, a two pound premie referred at fourteen months, had only light perception due to Retrolental Fibroplasia. She lived in a blighted suburban negro community with her grandmother,a part time domestic and retired grandfather who shared in her care. Her early development was at least normal, with words at ten months, walking at fourteen months, sentences with proper use of pronouns by two and mastery of the many educational toys and tricycle we loaned by three. That summer I pursuaded her grandfather to install a low rail on outside stairs and let her go outside without help, but he continued to interfere with discipline and make pitying remarks. Her grandmother who understood some of the subleties that shape the self concenpt responded with a vigorous "You're not a poor little anything" when Jessie once parrotted dramatically, "I'm just a poor little handicapped child", but until she was past four she let her rule the roost and did not require the independence of which she was capable. At my suggestion she entered Sunday School at three but had a tantrum on leaving and did not resume until after my next visit when I urged another trial with a warning that unless she left quietly she would not return. At three and a half she was accepted by a fine nursery after my talk at a staff meeting and offer to accompany her for a few days overcame the teacher's fear. The children did not question her race or blindness and a hair bow settled their doubts about her sex. In two years the only problem was a period of roughness in play, but at home she was increasingly unruly. She stubbornly resisted self help and was permitted the bottle until she decided to stop soon after I told her that now that she was in the older group I thought she was big enough to give it up, to which she replied, "I'm just a little girl". As kindergarten loomed her lagging social development was stressed and I worked with her with more advanced materials. She quickly responded when her weary grandmother became firm and was cooperative, well mannered and proud of her independence. On my last visit after a very successful year at our School for the Blind her grandmother gave eloquent thanks for the service which she felt sure saved them from spoiling her completely. Maria, a beautiful 6 year old who weighed in at a pound and a half, was born to refugee parents who spoke little English. She came home at 6 months but soon returned with pneumonia and on discharge they were told that she saw only light. Ignorant of what a blind child could do and frightened by her delicacy they kept her in a crib or pen until we met her at four. Elderly grandparents had come to live with them three months earlier and her mother went to work. They petted and talked to her, unlike her mother who claimed she had been too busy, but they demanded nothing of her. I found a volunteer social worker awaiting confinement who spoke Spanish. In talks with the mother on her day off and the grandmother she tried to inspire them to discipline and socialize her and played with Maria using our toys and my suggestions. I visited at night with the father who spoke more English. Maria ignored a stranger's greeting but it was easy to interest her in toys and she soon matched parts by color and named colors and objects in both languages. We loaned a potty chair and her grandmother undertook to train her and teach her to use a spoon. It took a year to persuade them to eliminate the bottle and although she ate french fries and crackers they never could withhold pureed foods when she refused other solids as advised by the pediatrician whose aid we enlisted. After three months my assistant visited twice a week and often took her to parks and stores. She showed them that she was safe on stairs and would respond to firmness. Her vocabulary increased rapidly and she soon acquired many concepts and skills but her social development lagged severely. In a Pre-Kindergarten class at our School for the Blind she gained much in independence and self control with strong pressure by a warm teacher and proved able to read half inch letters. This year she does well academically in the Kindergarten and is outgoing and competitive but she needs to learn to play with children and acquire social graces. With some force by her strict teacher she recently ate a hot dog. Her parents attend P.T.A. meetings and are at least including her in family outings and expecting more of her.

At four Joe's severe visual and oral defects and alarming illnesses were not his most severe problems. He was also hyperactive, destructive, impervious to discipline and treated people as objects except to seek help or, rarely, to snuggle against his mother. Unless he learns to love and want approval he will not be educable although at two he matched toy parts by color and soon by shape. This behavior may have an organic basis but his is not a demonstrative family and his parents need much help. For the past 3 months in twice weekly visits my energetic assistant has tried to make Joe feel that it is more fun to do things with a person than alone with a toy. Since abandoning over-zealous work with toys his mother often watches their antics for ideas to use in play with him. He laughingly accepted physical play such as being whirled in the worker's arms or bounced on her lap on the floor as she suddenly bent her knees and hugged him. When she playfully snatched a toy and ran he grimly pursued her, but soon laughed as he chased her and accepted a big hug and kiss when he caught her, although at first he would not seek her behind a door unless she had a toy. Recently he grabbed a loaf of bread from his mother and giggled as he hid with it and smilingly chased his little sister when she tried the game instead of screaming in anger. Our worker has rolled in leaves with him, inviting a neighbor boy to join them. She often kisses him on nose, ears and chin and beckons as she backs away and now he runs to her open arms for a hug over and over. On some days he is calmer and more responsive than others and when he goes off to use a toy alone she sits beside him in parallel play, but several times he has looked toward a toy and chosen to accept her invitation to an activity. These are small indications of sociability on which we hope to build.

A Demonstration Project of Speech Training for the Preschool Cleft Palate Child

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INTRODUCTION

THE FEW STUDIES WHICH HAVE BEEN MADE OF THE LANGUAGE AND SPEECH PATTERNS OF PRESCHOOL CLEFT PALATE CHILDREN, NOTABLY THOSE OF BZOCH IN 1956 AND MORRIS IN 1960 , INDICATE THAT DELAYED AND DEFECTIVE PATTERNS ARE LIKELY OCCURRENCES. ECKELMANN AND BALDRIDGE (1945), HAHN (1958) AND BZOCH (1956) ALL DISCUSS THE NEED FOR EARLY ATTENTION TO THE SPEECH OF CLEFT PALATE CHILDREN. IN PRACTICE, HOWEVER, MORE ATTENTION IS USUALLY GIVEN TO REMEDIATION RATHER THAN TO PREVENTION OF DELAYED AND INCORRECT LANGUAGE AND SPEECH PATTERNS. THIS PROBABLY HAS BEEN DUE, IN PART, TO THE IMMEDIACY OF THE PHYSICAL PROBLEMS WHICH REQUIRE ATTENTION, AND FURTHER, TO THE DIFFICULTY ENCOUNTERED IN OBSERVING AND PROGNOSTICATING LANGUAGE AND SPEECH DEVELOPMENT IN THE VERY YOUNG CHILD.

VERBAL COMMUNICATION, HOWEVER, IS NOT SIMPLY HELD IN ABEYANCE UNTIL THE PHYSICAL RESTORATION IS COMPLETED. THE CHILD, EVEN THOUGH TEMPORARILY EXPERIENCING A PERIOD OF PHYSICAL INCOMPETENCY, ATTEMPTS VERBAL COMMUNICATION. INCORRECT SPEECH PATTERNS MAY DEVELOP AS THE CHILD TRIES TO COMPENSATE FOR HIS PHYSICAL INADEQUACY. AS ERRORS BECOME STABILIZED AND REDUCED TO AUTOMATICITY THEY ARE DIFFICULT TO ELIMINATE.

MOREOVER, DELAYED AND DEFECTIVE VERBAL COMMUNICATION CAN BE BOTH SOCIALLY AND EDUCATIONALLY HANDICAPPING. A PILOT STUDY OF 50 SCHOOL AGE CLEFT PALATE CHILDREN SEEN AT THE SOUTH FLORIDA CLEFT PALATE CLINIC SHOWED 48, OR 96% , EVIDENCED SOME SPEECH PROBLEM AND 23, OR 46 % OF THESE WERE ACADEMICALLY RETARDED ONE OR MORE GRADES. THE CAUSE OF RETARDATION WAS NOT DETERMINED, BUT SINCE ALL OF THE CHILDREN HAD NORMAL MENTAL ABILITY IT WAS POSSIBLE THAT DELAYED AND DEFECTIVE VERBAL SKILLS WERE A CONTRIBUTING FACTOR.

IF A PRESCHOOL PROGRAM OF LANGUAGE AND SPEECH STIMULATION COULD PREVENT OR MINIMIZE PROBLEMS ENCOUNTERED IN DEVELOPMENT OF VERBAL COMMUNICATION, IT IS PROBABLE THAT THE NUMBER EXPERIENCING EDUCATIONAL RETARDATION WOULD BE FEWER AND THAT THE AMOUNT OF REMEDIAL SERVICES NECESSARY DURING THE SCHOOL YEARS COULD BE SUBSTANTIALLY REDUCED.

THE PURPOSE OF THIS PROJECT WAS TO STUDY THE EFFICACY OF EARLY LANGUAGE AND SPEECH STIMULATION FOR THE PRESCHOOL CLEFT PALATE CHILD. SPECIFICALLY, THE OBJECTIVES WERE TO 1) EVALUATE THE NEED FOR LANGUAGE AND SPEECH STIMULATION, 2) DEVELOP A PRESCHOOL PROGRAM OF LANGUAGE AND SPEECH STIMULATION, AND 3) EVALUATE THE EFFECTIVENESS OF SUCH A LANGUAGE AND SPEECH STIMULATION PROGRAM.

EVALUATION OF THE LANGUAGE AND SPEECH SKILLS OF PRESCHOOL CLEFT PALATE CHILDREN

THE FIRST OBJECTIVE OF THE PROJECT WAS TO EVALUATE THE VERBAL COMMUNICATION SKILLS OF THE PRESCHOOL CLEFT PALATE CHILD. THIS WAS UNDERTAKEN TO PROVIDE A DETAILED AND THOROUGH EXPLORATION OF THE EXTENT TO WHICH THESE CHILDREN NEED A PROGRAM OF LANGUAGE AND SPEECH STIMULATION.

PROCEDURES

TESTS ADMINISTERED FOR EVALUATION OF LANGUAGE SKILLS WERE AS FOLLOWS:

SLIDE 1

1. THE LANGUAGE ABILITY TEST . THIS TEST WAS COMPILED FOR THE PROJECT BY THE STAFF. TEST ITEMS WERE SELECTED FROM THE KUHLMAN BINET, THE STANFORD-BINET, FORM L AND FORM M OF TERMAN AND MERRILL, THE CATTELL, AND BAKER'S DETROIT TESTS OF LEARNING APTITUDE. THESE TEST ITEMS WERE CHOSEN TO OBTAIN AN OBJECTIVE MEASURE OF LANGUAGE BEHAVIOR. EACH ITEM WAS ADMINISTERED AND SCORED AS SPECIFIED BY THE SOURCE DIRECTIONS. THOSE ITEMS ARBITRARILY JUDGED TO REQUIRE THE SUBJECT TO COMPREHEND BUT NOT EXPRESS HIMSELF VERBALLY YIELDED A RECEPTIVE LANGUAGE SUBTEST SCORE WHILE THOSE JUDGED TO REQUIRE THE SUBJECT TO PRODUCE AND USE VERBAL LANGUAGE WERE USED TO DETERMINE AN EXPRESSIVE LANGUAGE SUBTEST SCORE. THESE TWO SUBTESTS COMBINED TO GIVE A TOTAL SCORE WHICH WAS REPORTED

AS A " LANGUAGE AGE".

2. THE VERBAL LANGUAGE DEVELOPMENT SCALE. THIS SCALE IS ADMINISTERED BY INTERVIEW OF THE PARENT. IT PROVIDES AN EVALUATION OF RECEPTIVE AND EXPRESSIVE LANGUAGE ABILITIES. A RAW SCORE IS OBTAINED AND THEN CONVERTED TO A " LANGUAGE AGE"

3. THE PEABODY PICTURE VOCABULARY TEST. THIS IS A MEASURE OF COMPREHENSION OF VERBAL LANGUAGE OR, AS DUNN CALLS IT, " HEARING VOCABULARY". FOR THIS TEST A RAW SCORE IS OBTAINED WHICH THEN IS CONVERTED TO A " MENTAL AGE".

SLIDE 2 MEASURES OF ARTICULATION SKILLS INCLUDED THE FOLLOWING:

1. ARTICULATION TEST. ARTICULATION WAS EVALUATED USING A TEST IN WHICH THE PRODUCTION OF 24 CONSONANT SOUNDS IN VARIOUS PROSITIONS AND 33 CONSONANT BLENDS WERE ASSESSED. PICTURES REPRESENTING EACH OF THE 100 TEST ITEMS WERE NAMED FOR THE CHILD BY THE EXAMINER. THE CHILD REPEATED EACH TEST WORD THREE TIMES. EACH ERROR RESPONSE WAS CLASSIFIED AS AN OMISSION, WHICH WAS CONSIDERED THE MOST SEVERE ERROR; OR A SUBSTITUTION (INCLUDING THE GLOTTAL STOP AND THE PHARYNGEAL FRICATIVE); OR AN INDISTINCT PRODUCTION, INCLUDING DISTORTION BY NASAL EMISSION, WHICH WAS CONSIDERED THE LEAST SEVERE ERROR. THE BEST PRODUCTION IN THE THREE ATTEMPTS WAS RECORDED.

2. AN INTELLIGIBULITY RATING . THE INTELLIGIBILITY OF THE CHILD'S CONNECTED SPEECH WAS RATED BY ONE OF THREE SPEECH CLINICIANS PRIOR TO ANY EVALUATION OF ARTICULATION SKILLS. PHRASES AND SENTENCES WERE ELICITED BY ASKING THE CHILD QUESTIONS ABOUT PICTURES IN THE BOOK, COME OVER TO MY HOUSE . INTELLIGIBILITY OF THE SPEECH SAMPLES WAS RATED ON THE FOLLOWING SCALE: (1) EXCELLENT- ALWAYS INTELLIGIBLE; (2) GOOD- USUALLY INTELLIGIBLE; (3) FAIR - INTELLIGIBLE; (4) POOR- PARTIALLY INTELLIGIBLE; AND (5) UNSATISFACTORY - COMPLETELY

UNINTELLIGIBLE.

3. THE MIAMI IMITATIVE ABILITY TEST. THE ABILITY TO IMITATE PRODUCTION OF 24 CONSONANT SOUNDS WHEN COMBINED WITH A NEUTRAL VOWEL WAS DETERMINED BY HAVING THE CHILD " WATCH AND LISTEN" AS THE EXAMINER REPEATED EACH COMBINATION. AFTER THREE PRODUCTIONS OF THE SOUND BY THE EXAMINER, THE CHILD WAS THEN INSTRUCTED, " NOW YOU DO IT." THE CHILD'S RESPONSE WAS CREDITED AS ONE POINT IF CORRECT, ONE - HALF POINT IF QUESTIONABLE, OR ZERO IF INCORRECT. ARTICULATORY PLACEMENT AND ACOUSTIC PRODUCTION WERE SCORED SEPARATELY FOR EACH SOUND.

OTHER INFORMATION COLLECTED ON THE CLEFT PALATE SUBJECTS INCLUDED A) TYPE OF CLEFT, B) AGE OF SURGICAL CLOSURE OF THE PALATE, C) NUMBER OF SURGICAL PROCEDURES, D) NUMBER OF SIBLINGS, AND E) RATING OF SOCIO-ECONOMIC STATUS.

AUDIOMETRIC SCREENING DETERMINED HEARING LEVELS OF ALL THE SUBJECTS. CHILDREN WERE EXCLUDED IF FOUND TO HAVE A HEARING LEVEL POORER THAN 20 DECIBELS (ISO-1964) AT ANY FREQUENCY IN THE 500-2000 HZ RANGE OF THE BETTER EAR.

THE LEITER INTERNATIONAL PERFORMANCE SCALE OR THE MERRILL-PALMER WAS USED TO MEASURE NONVERBAL MENTAL ABILITY. SUBJECTS WERE EXCLUDED IF FOUND TO HAVE INTELLIGENCE QUOTIENTS OF 75 OR BELOW.

E-O-S-
SLIDE 3

RESULTS IN LANGUAGE SKILLS

LANGUAGE ABILITIES OF 137 PRESCHOOL CLEFT PALATE CHILDREN WERE COMPARED WITH THOSE OF 165 NORMAL PRESCHOOL CHILDREN.

THE CLEFT PALATE CHILDREN WERE FOUND TO BE RETARDED IN BOTH LANGUAGE COMPREHENSION AND LANGUAGE USAGE. RETARDATION WAS DEMONSTRATED ON EACH OF THE LANGUAGE MEASURES WHEN THE SCORES OF THE CLEFT PALATE SUBJECTS WERE COMPARED WITH THEIR CHRONOLOGICAL

AGE LEVELS AND , ALSO WHEN COMPARED WITH THE SCORES OF THE NONCLEFT CONTROL SUBJECTS. ALTHOUGH THE LANGUAGE SCORES WERE PROGRESSIVELY HIGHER AT EACH SIX MONTH AGE INTERVAL, THE SCORES WERE CONSISTENTLY LOWER THAN THAN OF THE APPROPRIATE CHRONOLOGICAL AGE.

SLIDES
3,4,5

~~IT WAS CONCLUDED THAT THE CLEARLY DEMONSTRATED RETARDATION IN BOTH RECEPTIVE AND EXPRESSIVE LANGUAGE SKILLS FOR THE PRESCHOOL CLEFT PALATE CHILDREN INDICATES A NEED FOR AN EARLY PROGRAM OF LANGUAGE STIMULATION .~~

E-O-S-

ARTICULATION PATTERNS OF PRESCHOOL CLEFT PALATE CHILDREN.

THE ARTICULATION SKILLS OF 74 CLEFT PALATE CHILDREN 24 TO 72 MONTHS OF AGE WERE COMPARED TO THOSE OF 127 NONCLEFT CHILDREN OF SIMILAR AGES.

IN TERMS OF BOTH ARTICULATION SCORES AND INTELLIGIBILITY OF CONNECTED SPEECH, THE CLEFT CHILDREN WERE FOUND TO BE INFERIOR TO THE NONCLEFT CHILDREN. ALTHOUGH THE CLEFT PALATE SUBJECTS IMPROVED AT EACH AGE LEVEL, THEIR PERFORMANCE ALWAYS WAS POORER THAN THAT OF THE NORMAL SUBJECTS. THE EXTENT OF THE DIFFERENCE BETWEEN THE TWO GROUPS WAS UNDERSCORED BY THE FACT THAT THE FIVE TO SIX YEAR OLD CLEFT PALATE CHILDREN DID NOT ATTAIN THE INTELLIGIBILITY OR THE ARTICULATORY PROFICIENCY OF EVEN THE THREE TO FOUR YEAR OLD CONTROL SUBJECTS. FURTHERMORE, IT WAS ALSO FOUND THAT THE CLEFT PALATE CHILDREN, REGARDLESS OF AGE LEVEL, NEVER PERFORMED AS WELL AS THE NONCLEFT CHILDREN IN IMITATION OF EITHER ARTICULATORY PLACEMENT OR THE ACOUSTIC PRODUCTION OF SPEECH SOUNDS.

SLIDES
6,7,8,9

IN ADDITION TO MAKING A LARGER NUMBER OF ERRORS THERE WERE ALSO OBVIOUS DIFFERENCES IN THE ERROR PATTERNS OF THE CLEFT AND NONCLEFT SUBJECTS. ALTHOUGH SOME OF THE ERRORS MIGHT BE ATTRIBUTED TO VELO - PHARYNGEAL INCOMPETENCY ON THE PART OF THE CLEFT SUBJECTS, OTHERS REFLECTED A GENERAL PICTURE OF RETARDATION IN SPEECH DEVELOPMENT.

THE FINDINGS LED TO THE CONCLUSION THAT PRESCHOOL CHILDREN WHO HAVE DEFECTS WHICH INVOLVE THE SOFT PALATE NEED ASSISTANCE IN LEARNING LANGUAGE ARTICULATION SKILLS IF THEY ARE TO ACHIEVE SPEECH DEVELOPMENT COMMENSURATE WITH THEIR POTENTIALS PRIOR TO ENTRY INTO THE PRIMARY SCHOOL YEARS.

DEVELOPMENT OF A LANGUAGE AND SPEECH STIMULATION PROGRAM FOR PRESCHOOL CLEFT PALATE CHILDREN

A SEARCH OF THE LITERATURE REVEALED RELATIVELY LITTLE INFORMATION REGARDING PROCEDURES TO ASSIST THE PRESCHOOL CLEFT PALATE CHILD IN DEVELOPMENT OF LANGUAGE AND SPEECH SKILLS. THE PROCEDURES SUGGESTED BY ECKELMANN AND BALDRIDGE WERE MORE REMEDIAL THAN DEVELOPMENTAL. HAHN RECOMMENDED PARENTAL ASSISTANCE IN DEVELOPMENT BUT DEFERRED DIRECT WORK WITH THE CHILD UNTIL THREE TO FIVE YEARS OF AGE. TEXTBOOKS ON CLINICAL PROCEDURES IN SPEECH PATHOLOGY GIVE LITTLE ATTENTION TO SPECIFIC METHODS FOR HABILITATION OF THE SPEECH PROBLEMS OF THE VERY YOUNG CLEFT PALATE CHILD. IT WAS NECESSARY, THEREFORE TO DEVELOP AND ORGANIZE A PROGRAM OF LANGUAGE AND SPEECH STIMULATION FOR THE PRESCHOOL CLEFT PALATE CHILD. THIS PROGRAM ALSO PROVIDED A MEDIUM FOR EVALUATION OF THE EFFICACY OF EARLY STIMULATION FOR THESE CHILDREN .

PURPOSE AND OBJECTIVES THE SPECIFIC OBJECTIVES OF THE LANGUAGE AND SPEECH STIMULATION PROGRAM WERE: (1) TO ALLAY PARENTAL ANXIETY CONCERNING THE CHILD'S DEVELOPMENT OF LANGUAGE AND

SPEECH SKILLS; (2) TO DEVELOP THE CHILD'S CONFIDENCE IN HIS ABILITY TO ACHIEVE INTELLIGIBLE VERBAL COMMUNICATION; (3) TO STIMULATE THE DEVELOPMENT OF SPEECH AND LANGUAGE SKILLS COMMENSURATE WITH THE CHILD'S ABILITY; (4) TO PREVENT OR MINIMIZE THE DEVELOPMENT OF UNDERSIRABLE COMPENSATORY PATTERNS WHEN PHYSICAL INADEQUACIES INTERFERE WITH THE NORMAL DEVELOPMENT OF ARTICULATION SKILLS.

THE ORGANIZATION OF THE PROGRAM WAS SUCH THAT THE CHILDREN WERE SEEN INDIVIDUALLY FOR ONE HOUR EACH WEEK. THE MOTHER, OR THE PERSON WHO SERVED AS THE MOTHER FIGURE, ATTENDED EACH SESSION WITH THE CHILD.

THE HOUR-LONG SESSIONS WERE DIVIDED INTO THREE EQUAL SECTIONS: (1) THE CLINICIAN WORKED DIRECTLY WITH THE CHILD WHILE THE MOTHER OBSERVED, (2) THE CLINICIAN COUNSELED THE MOTHER AND DIRECTED HER PARTICIPATION IN THE LANGUAGE AND SPEECH STIMULATION ACTIVITIES, AND (3) THE CLINICIAN OBSERVED AS THE MOTHER ASSUMED THE RESPONSIBILITY FOR THE STIMULATION.

THESE SESSIONS PROVIDED OPPORTUNITY FOR THE CHILD TO BECOME ORIENTED TO THE PROGRAM; THE CLINICIAN TO BOTH DIRECT AND OBSERVE THE CHILD'S RESPONSES; THE PARENT TO OBSERVE THE CLINICIAN AND THE CHILD, AND THE CLINICIAN TO OBSERVE AND DIRECT THE PARENT'S PARTICIPATION.

EVALUATION OF THE LANGUAGE AND SPEECH STIMULATION PROGRAM

IN ORDER TO DETERMINE THE VALUE OF THE LANGUAGE AND SPEECH STIMULATION PROGRAM DATA WERE COLLECTED AND ANALYZED ON PRESCHOOL CLEFT PALATE CHILDREN PARTICIPATING IN THE PROGRAM AND ON A CONTROL GROUP WHO RECEIVED NO SUCH PROGRAM.

SUBJECTS THERE WERE 97 CHILDREN IN THE MIAMI AREA REFERRED TO THE DEMONSTRATION PROJECT AS POSSIBLE PARTICIPANTS IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM. 68 WERE ENROLLED IN THE PROGRAM. DATA ARE REPORTED, HOWEVER, FOR ONLY THOSE CHILDREN WHO 1) HAD CLEFT WHICH INVOLVED THE SOFT PALATE, 2) HAD UNDERGONE INITIAL SURGICAL REPAIR OF THE SOFT PALATE PRIOR TO ANY TESTS FOR RE-EVALUATION, 3) WERE OF NORMAL MENTAL ABILITY AS EVALUATED BY A NONVERBAL MEASURE, 4) HAD RECEIVED NO PREVIOUS LANGUAGE AND SPEECH STIMULATION, 5) WERE FROM HOMES WHERE ENGLISH WAS THE SPOKEN LANGUAGE, AND 6) WERE ENROLLED IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM FOR AT LEAST 12 MONTHS. USE OF THESE CRITERIA TO SELECT THE SUBJECTS FOR WHOM DATA ARE REPORTED LIMIT THE NUMBER OF EXPERIMENTAL SUBJECTS TO 20.

THERE WERE 97 CHILDREN OUTSIDE THE MIAMI AREA WHO WERE EVALUATED AS POSSIBLE CONTROL SUBJECTS BECAUSE THEY COULD NOT PARTICIPATE IN THE DEMONSTRATION PROJECT. THESE WERE ALL OF THE CHILDREN UNDER SIX YEARS OF AGE WHO WERE KNOWN TO FLORIDA CRIPPLED CHILDREN'S COMMISSION AS HAVING HAD CLEFT PALATES AND WHO COULD BE CONTACTED. THE SAME CRITERIA USED TO SELECT THE EXPERIMENTAL SUBJECTS WERE USED TO SELECT

THE CONTROL SUBJECTS. RATHER THAN PARTICIPATION IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM, HOWEVER, IT WAS REQUIRED THAT THESE SUBJECTS RECEIVE NO SUCH SERVICES. USE OF THESE CRITERIA LIMITED THE NUMBER OF CONTROL SUBJECTS TO 25.

PROCEDURES THE TEST BATTERY ADMINISTERED FOR EVALUATION OF LANGUAGE AND SPEECH SKILLS WAS PREVIOUSLY DESCRIBED IN THIS REPORT.

HEARING WAS EVALUATED AT THE TIME OF THE ANNUAL TESTING. TWO CHILDREN WHO DEMONSTRATED A SENSORI-NEURAL LOSS WERE EXCLUDED. OTHER THAN THIS, HEARING LEVELS WERE NOT USED AS A CRITERIA FOR EXCLUDING OR INCLUDING SUBJECTS IN THE EXPERIMENTAL OR CONTROL GROUPS BECAUSE IT WAS ASSUMED THAT NEARLY ALL CHILDREN WHO HAVE PALATAL DEFECTS SUFFER EPISODES OF OTITIS MEDIA AND CONCOMITANT REDUCTION IN HEARING LEVELS. THE EFFECTS, THEREFORE, OF EPISODES OF REDUCED HEARING LEVELS PROBABLY WERE OPERATING FOR BOTH THE EXPERIMENTAL AND CONTROL GROUPS.

SLIDE 10 EVALUATION OF LANGUAGE SKILLS AS SHOWN IN SLIDE 10, THE MEAN MECHAM LANGUAGE AGE OF THE EXPERIMENTAL SUBJECTS WAS 8 MONTHS BELOW THAT OF THE CONTROLS ON THE INITIAL TEST. WHEN THE SECOND EVALUATION WAS MADE APPROXIMATELY 11 MONTHS LATER, THE CHILDREN PARTICIPATING IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM HAD GAINED 18 POINTS AS COMPARED WITH A GAIN OF 13 POINTS FOR THOSE NOT PARTICIPATING. NORMALLY, THESE LANGUAGE SCORES SHOULD BE EQUIVALENT TO THE CHRONOLOGICAL AGE OF THE CHILD. THE MEAN SCORE OF THE EXPERIMENTAL GROUP ON THE SECOND TEST WAS ABOVE THE MEAN CHRONOLOGICAL AGE,THUS INDICATING EXCELLENT PROGRESS FROM THE STIMULATION PROGRAM. THE MEAN SCORE OF THE CONTROL SUBJECTS ON THE SECOND TEST WAS APPROXIMATELY SIX MONTHS BELOW THEIR CHRONOLOGICAL AGE.

SLIDE 11 THE MEAN SCORES OF THE TWO GROUPS WERE SIGNIFICANTLY DIFFERENT AT THE INITIAL TEST OF THE PEABODY BUT NOT SIGNIFICANTLY DIFFERENT

AT THE RETEST DESPITE AN 18-MONTH CHRONOLOGICAL AGE GAP IN FAVOR OF THE CONTROL GROUP. THE PEABODY SCORES OF THE CONTROL SUBJECTS WERE 9 MONTHS BELOW THEIR MEAN CHRONOLOGICAL AGE WHILE THOSE OF THE CHILDREN WHO PARTICIPATED IN THE PROGRAM WERE ONLY 2 MONTHS BELOW THEIR MEAN CHRONOLOGICAL AGE.

SLIDE 12 IN SUMMARY, THE RESULTS OF THE LANGUAGE TESTS INDICATED THAT THE CHILDREN WHO PARTICIPATED IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM MADE GREATER GAINS ON EACH OF THE THREE LANGUAGE TESTS THAN DID THE CONTROL SUBJECTS WHO DID NOT HAVE SUCH A PROGRAM. AS A GROUP, THEY HAD ACHIEVED NORMAL LANGUAGE DEVELOPMENT.

SLIDE 13 EVALUATION OF SPEECH SKILLS AS SEEN IN SLIDE 13, OUT OF A POSSIBLE ERROR SCORE OF 100, ON THE INITIAL TEST THE EXPERIMENTAL GROUP HAD A MEAN OF 81 AND THE CONTROLS, 73. THIS IS A DIFFERENCE OF ONLY 8 POINTS DESPITE THE FACT THAT THE CONTROL SUBJECTS WERE 15 MONTHS OLDER. WHEN RETESTED, THE EXPERIMENTAL SUBJECTS EARNED A MEAN ERROR SCORE OF 43 WHICH WAS SIGNIFICANTLY BETTER THAN THAT OF THE CONTROL GROUP MEAN OF 66. THE EXPERIMENTAL GROUP DEMONSTRATED A 33 POINT GAIN COMPARED TO A 7 POINT GAIN FOR THE CONTROLS.

SLIDE 14 ON BOTH OF THE SUBTESTS OF IMITATIVE ABILITY, THE BEST POSSIBLE SCORE WAS 24 POINTS. THE EXPERIMENTAL SUBJECTS WERE INFERIOR TO THE CONTROLS ON THESE TWO TESTS AT THE TIME OF THE INITIAL EVALUATION. AT THE TIME OF THE SECOND TEST, HOWEVER, THE MEAN SCORES OF THE EXPERIMENTAL GROUP WERE HIGHER THAN THE CONTROLS EVEN THOUGH THE CONTROL SUBJECTS WERE 17 MONTHS OLDER THAN THE EXPERIMENTAL GROUP. THE CHILDREN WHO PARTICIPATED IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM HAD GAINED 7 POINTS IN THE CONSONANT PLACEMENT AND 6 POINTS IN THE ACOUSTIC PRODUCTION SCORE WHILE THE CONTROLS IN THE SAME PERIOD OF TIME HAD GAINED ONLY 2 AND 1 POINTS, RESPECTIVELY.

SLIDE 15 AS SHOWN IN SLIDE 15, NONE OF THE EXPERIMENTAL SUBJECTS HAD AN INTELLIGIBILITY RATING OF ONE OR TWO ON THE INITIAL TEST, BUT SIX ATTAINED THIS LEVEL BY THE SECOND TEST. THREE OF 20 CONTROL SUBJECTS WERE AT THIS LEVEL ON THE INITIAL TEST AND ONLY TWO IMPROVED TO THIS LEVEL ON THE SECOND TEST. FURTHERMORE, ONLY TWO OF 13 CONTROL SUBJECTS IMPROVED THEIR RATINGS, WHILE SEVEN OF 14 EXPERIMENTAL SUBJECTS ROSE ABOVE THIS INITIAL LEVEL.

SLIDE 16 THE RESULTS OF EACH OF THE MEASURES OF SPEECH SKILLS INDICATED SUPERIOR PROGRESS FOR THOSE CHILDREN WHO PARTICIPATED IN THE LANGUAGE AND SPEECH STIMULATION PROGRAM COMPARED WITH THOSE WHO DID NOT.

CONCLUSIONS

PRESCHOOL CLEFT PALATE CHILDREN WHO HAD DEFECTS WHICH INVOLVED THE SOFT PALATE WERE FOUND TO BE RETARDED IN BOTH RECEPTIVE AND EXPRESSIVE LANGUAGE DEVELOPMENT. THEY WERE ALSO FOUND TO HAVE DELAYED AND DEFECTIVE SPEECH PATTERNS. THE CLEFT PALATE CHILDREN AT FIVE TO SIX YEARS OF AGE, DESPITE NORMAL MENTAL ABILITY, WERE NOT AS PROFICIENT AS THREE-YEAR-OLD NORMAL CHILDREN. DELAYS IN DEVELOPMENT OF VERBAL COMMUNICATION WERE EVIDENCED AT THE EARLIEST AGES AT WHICH THESE CHILDREN WERE EVALUATED. FOR SOME THIS WAS AS EARLY AS 18 MONTHS. IT WAS CONCLUDED THAT THESE CHILDREN NEEDED AND COULD PROFIT FROM A PROGRAM OF LANGUAGE AND SPEECH STIMULATION INITIATED IN INFANCY.

A RESEARCH AND DEMONSTRATION PROGRAM DESIGNED TO STIMULATE DEVELOPMENT OF VERBAL COMMUNICATION WAS CONDUCTED. PARTICIPANTS WERE INTRODUCED INTO THE PROGRAM AS EARLY AS POSSIBLE, PREFERABLY WHEN THEY WERE 18 MONTHS OLD. THE MOTHER, OR MOTHER FIGURE, WAS AN ACTIVE PARTICIPANT AND LEARNED HOW TO ENCOURAGE LANGUAGE DEVELOPMENT AND PROVIDE SPEECH STIMULATION. IN THIS WAY, THE ONE-HOUR WEEKLY SESSIONS WERE EXTENDED BY HOME STIMULATION.

CLINICAL OBSERVATION INDICATED THAT THE PARTICIPANTS IN THE PROGRAM MADE PROGRESS THAT BROUGHT LANGUAGE SKILLS TO A LEVEL COMMENSURATE WITH CHRONOLOGICAL AGE. DRAMATIC IMPROVEMENT IN ARTICULATION SKILLS AND IN INTELLIGIBLITY OF SPEECH WAS ALSO NOTED. WHEN VELOPHARYNGEAL INCOMPETENCY OR OTHER PHYSICAL PROBLEMS WERE PRESENT THE CHILDREN AND THEIR MOTHERS WERE TAUGHT TO ACCEPT NECESSARY DISTORTIONS, E.G. NASAL AIRFLOW, IN PRODUCTION OF SPEECH SOUNDS. IT WAS OBSERVED THAT THE CHILDREN WERE ABLE TO LEARN CORRECT ARTICULATION PLACEMENT DESPITE MOST PHYSICAL INADEQUACIES AND, THUS, INCORRECT COMPENSATORY PATTERNS WERE MINIMIZED OR PREVENTED.

COMPARISON OF TEST SCORES ON VARIOUS MEASURES OF COMMUNICATIVE SKILLS OF PARTICIPANTS IN THE PROGRAM AND NONPARTICIPANTS CONFIRMED THE CLINICAL IMPRESSIONS. THE PARTICIPANTS MADE EXCELLENT PROGRESS WHICH WAS SUPERIOR TO THAT OF THE NONPARTICIPANTS DEMONSTRATING THAT THIS TYPE OF PROGRAM FOR THE VERY YOUNG CLEFT PALATE CHILD, PROVIDES EFFECTIVE ASSISTANCE IN OVERCOMING DELAYED LANGUAGE AND IN PREVENTING ACQUISITION OF INCORRECT ARTICULATION PATTERNS.

THE STATISTICAL DATA, WHILE INDICATING THE BENEFITS OF THE PROGRAM, WERE BASED ON ONLY 12 MONTH TEST-RETEST EVALUATIONS. THE CLINICAL INDICATIONS AND LIMITED RETEST DATA AVAILABLE FOR LONGER PERIODS SHOWED A CONTINUATION OF SIGNIFICANTLY SUPERIOR PROGRESS FOR THE PARTICIPANTS.

New Techniques in Speech Therapy for Young Children

(Therapy Procedures and Parental Involvement)

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New Techniques in Speech Therapy for Young Children

(Therapy Procedures and Parental Involvement)

Several years ago a fellow therapist and I did some some soul searching in regard to the results of our efforts to stimulate speech development in young children. I had been as successful as any other therapist, I felt, but I was not able to convince myself that the small group around a table or the hallowed "one to one" procedure was getting really effective results before the M. A. of five. The children would give back the words and dutifully play the simple games, but they still had the same personality problems and often refused to use speech other than at the Clinic. Progress was slow, and all too frequently as they reached pre-school or school, the mothers called to complain of poor peer relationships and immature classroom adjustment. The procedures we now use grew out of careful re-evaluation of our therapy and follow-up.

We explored the backgrounds of many of our cases with delayed speech for the variables that possibly contributed to the condition which brought the referral of the children to the speech clinic. Since we are all aware that the conditioning of a young child begins the day he returns from the hospital, think, if you will with me, for the variables which "program" this child to handle the incoming data as he grows and developes.

An incorrectly programmed computer will refuse the data or react in a bizarre manner to it, so with the child. Most every new parent is somewhat awed, maybe a little frightened, and can be almost overwhelmed by this small creature, but in spite of the fact that some child psychologists have commented in jest that the first child "should be disposable," most parents manage to create a climate in which fairly normal sequential development procedes.

However, if for any reason there are variables which seem in some way to frighten, to disappoint, to confuse or to anger the parent, incorrect programming begins. Such things as a traumatic delivery with early concern for the child's survival, any early convulsions, birth defects such as a cleft palate, Treacher Collins Syndrome, Spina Bifida, etc., or even a striking resemblance to a relative who is undesirable, and in some rare cases a child was not the sex desired, or even possibly a hearing loss, to name a few. Parents became indecisive and unsure in their management, so the pediatrician at first and subsequently the speech pathologist is consulted regarding delay in development of which language often is the first sign. If there is an obvious handicap, this is blamed, but all too often the child seems physically normal in every way. Only the behavior reactions are similar in most of the children with delayedspeech and language regardless of the absence or nature and degree of a handicap.

We see, therefore, a silent group of children that are candidates for the group procedure we have used and modified because it gets the desired results. It is effective in thedevelopment of the growth of the emmotional, intellectual, and performance levels.

The suggested approach is two fold. Assignment of the delayed speech child to a non directive speech stimulation group in the hands of competent therapists and parental support by another therapist who knows intimately the procedures being used with the child and the degree of his progress from day to day and week to week.

By the age of 18months to 2 years these children are found not interacting appropiately with peers or with adults. They have a behavior pattern dedicated to manipulating and controlling adults, consequently shutting out other segmants of the environment, precluding concept formation and the acquiring of normal play patterns and adequate language development.

The children are placed in ~~a~~ group situation with a large number of children in various stages of delay. Specific limits are enforced for safety and undirected behavior is permitted within the limits of the group structure. Early in therapy the children usually do one of two thingS They cry and scream, or they get in a corner and suffer silently. Since crying is emotionally healthy, it is not at all rejected but is regarded as the child's communication and treated accordingly. Please be aware that these children are not psychotic in the psychiatric sense, but their environment has accentuated the normal give and take between parent and child into a "bizarre demanding" on the part of the child. They seem to be only aware of the adult figures and ignore toys and peers.

As the child finds himself in this environment where he is released from the need to control the authority figures, the play patterns develop and speech and language development emerges in that order.

Basically, we have tried to structure an environment in which the physical space and materials, the children in the group personnel, and the therapists blend to provide a climate in which the development can emerge through natural sequential play. Steps in play cannot be taught or skipped, they must emerge. Materials are provided for constructive happy occupation such as any pre-school child would enjoy. Children as "crowded into small spaces so that interaction must take place. It is imperative that the management of the authority figures be consistent and other authority figures such as volunteers and students are introduced so that the child is compelled to accept direction from numerous teacher figures. As a result, easy adjustment to pre-school and church school follows.

Children must be allowed to make some mistakes, get bumped a little, solve their small problems without comment from the adults. Language from the adults is kept at a minimum and the same language is used in specific situations by all the therapists and assistants. The results are very rewarding in terms of children who feel adequate, play happily and communicate.

Now for the second phase, which is really a diff~~erent~~icult part of the therapy, has to do with parental involvement. When you suggest to a parent that the child is just going to learn to accept separation from the parent and learn to play, they vary in their reactions from disbelief to down right hostility. This is therapy!

Parent counselling takes the form of both group and individual approach. Initially the group procedures are explained to the parents in a group. We frankly tell them at first that they will be very sure nothing worthwhile is taking place. Informal weekly group meetings are held with the mothers under the direction of a competent Medical-Social worker while the children are in session for two hours. Various aspects of child development are discussed and parents are encouraged to voice opinions, ask questions, and to share their experiences.

Individual counselling is carried out by a speech therapist on a very informal basis. The mothers are given much approval and little bits of encouraging behavior is reported as it occurs. The parents are encouraged to ask questions and when possible, with our limited physical facilities, are shown what the children are doing. The parents are encouraged to provide parties for special occasions such as birthdays and holidays, and are invited to participate at this time with the children in the group. Children must learn that Mama can stay or Mama can leave. Parents of older children still at the Clinic often are very helpful with parents of new clients in explaining steps of progress. The child's progress depends a great deal on our procedures which lead the parents to feel adequate, first as a person and then as a parent so that they proceed with confidence and a minimum of frustation in their daily handling of their child. We try to give the parent some comment regarding the progress of the child each day. One of the best tools to help in this area has been films of the groups in action which we have shown for the parents. This is one of the better ways to teach them the various improvement areas for which we are working. We make clear that after the child has learned to play and to relate effectively, he is ready to benefit from routine accepted speech therapy. Often speech and language emerge and none is needed.

In short, we try, as a team, to lead the child to a positive self concept, adequate play and communication levels, and the parents to an awareness that they can be concerned without being afraid, they can limit and discipline without rejection, and that their natural pride,their frustration and fears are known and felt by accepting devoted parents universally.

We are not always 100% successful, but it's rewarding to watch the development, and we do graduate to educational groups a greater percentage of talking children who adjust adequately to training programs.